هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-001

Assessment of parasitic contamination of Iranian currency

Sanaz Tavakoli[1], Molouk Beiromvand[1], Abdollah Rafiei[1], Mahmoud Rahdar[1]

1-Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

* Corresponding author: Molouk Beiromvand[1]

Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Email: san.tavakoli@gmail.com

Abstract

Background: Every day throughout the world, money in the form of coins or notes exchanges mainly through clean and dirty hands by people. This can increase the possibility of contamination with pathogenic microorganisms that can be potentially a risk for human public health. Previous investigations in different countries especially in developing countries about contamination of currencies show that paper notes and coins can be a source of pathogenic and nonpathogenic microorganisms. In Iran, different studies were performed about the role of money in transmission of bacterial contamination, but there is no study about parasitic contamination.

Material method: Therefore, in the current study 506 coins and notes were collected from different places including banks, supermarkets, bakeries, badgers and taxi drivers and then investigated for parasitic contaminations using microscopic methods. In order to isolate probable parasites, flotation method using formal-saline with tween 20 were used and resulted sediments were checked by direct smear and Ziehl-Neelsen staining. Moreover, 50 samples were checked for fungal and bacterial contaminations using potato-dextrose agar, blood agar and nutrient agar, respectively. Furthermore, differentiation tests and Gram staining were used for more confirmation.

Result: Based on results, no parasitic and fungal contamination were found, but bacterial examinations showed Gram-negative and finally Enterobacter in 4 samples.

Conclusion: Based on the obtained results, it seems that currencies in our country have no role in the transmission of parasitic contamination, but due to positive bacterial cases it seems that probably money can transfer pathogenic or non pathogenic bacteria.

Keywords: Parasite, Money, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-002

Prevalence of intestinal parasites in human and domestic animals from Alvar- e Garmsiri District, Khuzestan

Somayeh mirzavand[1], Molouk Beiromvand[1]

1-Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

* Corresponding author: Somayeh Mirzavand

Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Email: somayehmirzavand65@gmail.com

Abstract

Background: Intestinal parasites are one of the major health and economic problems in tropical and developing countries. In Iran like other developing countries, lack of enough awareness and poor hygiene in rural areas is a threat for human life Furthermore, close contact of domestic animals with humans can increase the risk of zoonotic parasites transmission. Hence, the present study was conducted to determine the prevalence, particularly zoonotic intestinal parasites in humans and animals.

Material method: This study was conducted in villages of Alvar-e Garmsiri District, located in the north of Khuzestan province during 2014-2015. In total 238 fecal samples were collected from different regions. Of the 238 samples obtained, 71 were from humans and 167 from animals, including cattle (27), sheep (69), goats (59), dogs (4), and cats (8). All fecal samples were placed in Ziploc bags, and transferred to the Faculty of Medicine, Ahvaz Jundishapur University of Medical Sciences for microscopic examinations. The collected samples were investigated first using naked eyes, and then by direct smear and sucrose flotation method.

Result: Based on obtained results Blastocystis spp. was more prevalent in humans and animals. In humans samples 13 (18.3%) and in animals 43 (25.7%) were infected with Blastocystis spp..The second more prevalent parasite was *Giardia*, which 3 (4.2%) and 13 (7.8%) animal cases were positive.

Conclusion: Close contact of humans and livestock can increase the risk of zoonotic disease transmission. Giardia and Blastocystis are among the most important zoonotic protozoa which poor sanitation and low level of education of animal owners in rural villages can increase the risk of transmission. Therefore, control programs including education for livestock owners to prevent zoonotic infection can reduce possible transmission

Keywords: Intestinal parasites, Zoonotic, Alvar-e Garmsiri, Khuzestan

PP-003

Prevalence of intestinal parasites among grocers in Andimeshk, southwest Iran

Ehsanallah Mirrezaie[1], Molouk Beiromvand[1]

1-Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

* Corresponding author: Ehsanallah Mirrezaie

Email: e.mirrezaie57@gmail.com

Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Abstract

Background: Intestinal parasites are among the major public health problems in developing countries, where risk factors such as poor personal hygiene, environmental sanitation and low level of education play an important role in infection transmission. Humans can be infected with intestinal parasites through contaminated water, food, and vegetables. In Iran, like many tropical and developing countries, protozoan and helminthic infections are more prevalent among people with poor hygiene and a poor education as well. The aim of the current study was to assess the prevalence of intestinal parasites among university educated and non university educated grocers in Andimeshk, Khuzestan.

Material method: This cross-sectional study was undertakenamong a total of 480 grocers in Andimeshk, Khuzestan province in 2015. The collected stool specimens were investigated using direct saline smear, Lugol's iodine- staining, and Sucrose flotation methods. Data analysis was done using SPSS software (version 16).

Result: A total of 264 university-educated and 216 without a university degree grocers participated in the study. The overall prevalence of intestinal parasites in the examined participants was 16 (3.3%), including *Giardia lamblia* 11 (2.3%), *Blastocystis hominis* 3 (0.6%), *Entamoeba coli* 1 (0.2%), and one cases (0.2%) had co- infections with *G. lamblia* and *Hymenolepis nana*. The higher prevalence 12 (2.5%) was found among without a university degree participants. Four hundred sixty four (96.7%) fecal samples were negative for protozoa and helminths infections.

Conclusion: Based on the obtained results, protozoan infections were more prevalent than helminths infections. The higher prevalence of *G. lamblia* compared to other parasites indicates the need for more control programs including health education and periodic fecal examination for the prevention of food borne diseases. Furthermore, it can be concluded that since most of the infected participants did not have a university degree, level of education and lack of enough awareness has an essential role in the transmission of the infective stages of the parasites.

Keywords: Intestinal parasites, Sucrose flotation, Grocer, Andimeshk, Khuzestan

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-004

The effect of aqueous and alcoholic extracts of Anethum graveolens dhi leaveson thegrowth of Trichomonas vaginalis in vitro

Nima Mohammadzadeh, Ali Sheivaee, Zohre Momeni, Sara Bafande

1. IRAN UNIVERCITY
2. IRAN UNIVERCITY
3. MODARRES UNIVERCITY
4. AZAD ISLAMIC IRAN UNIVERCITY

* Corresponding author: Nima Mohammadzadeh

Email:www.n_lmb@yahoo.com

Abstract

Background: Trichomoniasis is a sexually transmitted disease (STD) caused by a tiny parasite called Trichomonas vaginalis. Metronidazole is used as routine treatment of disease. Nowadays, some resistant strains to this treatment have also been detected. In this study, we evaluate the effect of aqueous and alcoholic extracts of *Anethum graveolens dhi* leaves on thegrowth of *T. vaginalis* in vitro.

Material method: In this study, some persons were infected with *T. vaginalis* that they were referred to Razi Diagnostic laboratory, urine sediment of these patients were cultured in a TYI-S-33 medium and were passaged for ten days . Then axenic culture of parasite was used to study the effect of *Anethum graveolens dhi* extract. Different concentrations (6.25, 12.5, 25, 50, 100, 200 µg/ml) of aqueous and alcoholic extracts of *Anethum graveolens dhi* leaves were tested in three different times (24, 48 and 72h) on *T. vaginalis* trophozoeites. Also the effect of metronidazole (5µg/ml) was investigated as the drug control. In all tests the numbers of live and dead parasites were counted by trypan blue staining.

Result: Result showed that the alcoholic and aqueous extracts of *Anethum graveolens dhi* had the inhibitory effects on the growth of T. vaginalis. Alcoholic extract (100µg/ml) and aqueous extract (100µg/ml) of Anethum graveolens dhi showed 100% growth inhibition (GI) during 48 and72 hours, respectively.

Conclusion: While the alcoholic and aqueous extract of *Anethum graveolens dhi* have anti-Trichomonas effect, the anti-Trichomonas properties of alcoholic extract is more than its aqueous extract. Since Anethum graveolens dhi is an herbal drug, it can be tested in vivo.

Keywords: *Trichomonas vaginalis*, *Anethum graveolens dhi*, aqueous and alcoholic extracts

اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
و
هشتمین کنگره بین المللی
آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-005

The epidemiological profile of tick-borne relapsing fever in, western Iran

Hamid Kassiri[1], Kobra Dostifar[1], Mansor Karimi[1]

1-School of Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

* Corresponding author: Hamid Kassiri

School of Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Hamid.Kassiri@yahoo.com

Abstract

Background: Tick-Borne Relapsing Fever (TBRF) is a zoonotic disease involving many species of rodents and small mammals in widely distributed areas throughout the world. We describe the epidemiological and demographic characters of found cases of TBRF in the Bijar County, and briefly review it for preventing this illness in the year of 2007 – 2008.

Material method: A confirmed patient was defined as a person who had both febrile illness and detection of spirochetes by Wright-Giemsa or dark-field microscopy in a peripheral blood smear. All patients were asked to complete a questionnaire including demographic characteristics and clinical and epidemiological data of TBRF. Data was analyzed using SPSS. Eleven cases have been reported.

Result: There were 5 cases (45.4%) of the patients younger than 10 years. Of the patients, 63.6% occurred in summer. All cases developed during the months of May to October. All of the reported cases were living in rural areas. Fever and chills, the most common symptoms, occurred in all patients. Recurrent fever occurred in 54.5% cases. All of the cases were cured according the national guideline for TBRF treatment. Only 18.2% of the patients were hospitalized. No patients this study died of TBRF. Most (54.5%) of the cases were students. Approximately 72.7% of the patients were keeping cattle and sheep near or inside their homes.

Conclusion: As demonstrated, TBRF is a considerable public health concern, especially for children and students living in Bijar County. Considering the epidemiology of the disease, new control measures should be established.

Keywords: Epidemiology, Relapsing fever, Tick, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-006

A study on seroprevalence of anti toxocariasis antibody (IgG) among farms workers in Shahre-kord & investigation of farms soil specimens for Toxocara egg

Bahman Khalilidehkordi[1], Bahman Khalili [2], Abbas Razavi[3], Simin Taghipour[4]

1-& entomology department of parasitology & mycology

2-Department of Parsitology, Faculty of medicine Shahrekord, Iran

3-Department of Parsitology, Faculty of medicine Shahrekord, Iran

4- Department of Mycology Ahvaz University of Medicine, Ahvaz, Iran

* Corresponding author: Bahman Khalili

Department of Parsitology, Faculty of medicine Shahrekord, Iran

Email: bahnab55_khalili@yahoo.com

Abstract

Background: Toxocariasis is one of the most common zoonotic parasitic diseases with worldwide distribution, caused by Toxocara canis and Toxocara cati. Toxocara canis is the most common intestinal nematode of dogs and etiologic agent of visceral larva migrant syndrome. Whereas Shahre-kord is located on husbandry area and there are no studies on husbandry jobs and soil of farms, this study aimed to investigate farms soil for Toxocara eggs and also to find seroprevalence of anti-Toxocara antibody in farm workers in Shahre-kord by using ELISA method.

Material method: In this study 203 blood samples as test and 120 blood samples as control were prepared. Also 150 samples of soil from livestock were obtained .The presence of anti-Toxocara antibody (IgG) was tested using ELISA method. The presence of Toxocara canis egg in soil specimens were investigated by flotation method using sodium nitrate. Processing and data analysis using SPSS Version 16 software were used

Result: the study showed that out of 150 soil specimens 9 soil specimens Toxocara canis egg was detected. In cases group 6 cases (3%) were positive for anti Toxocara-canis antibody. serum but in control group 2 cases (1/7%) anti-Toxocara antibody were found.

Conclusion: The results of the study showed that soil specimens of these farms are infected with Toxocara eggs. These findings will increase the programs information and livestock control plans against Toxocariasis.

Keywords: Toxocariasis, Seroprevalence, ELISA

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-007

Survey on seroepidemiology of human hydatidosis with ELISA method in Abhar city at 2014

Jaber Davoudi [1], Hamed foroutan[1], Afshin bahman shabestari[1]

1-Department of Parasitology, Agriculture Faculty, Islamic Azad University, Abhar Branch, Abhar - Iran

* Corresponding author: Jaber Davoudi

Department of Parasitology, Agriculture Faculty, Islamic Azad University, Abhar Branch, Abhar - Iran

Email: jaber_davoudi@yahoo.com

Abstract

Background: Hydatid cyst is one of the most prevalent zoonoses between human and animals that in each year causes a great deal of economical and health damages in the world, and its recognition is necessary in respect to economical and health issues. Cause of disease is from the *Echinococcus* genus of cestoda (Family: *Taeniidae*) and in respect to significance, it is considered as the second vermi- parasitic disease in the world. This parasite has global propagation. Iran is regarded as the andemic area of this disease. Abhar is favorable in regard to the existence of involved factor in development route of parasite The aim of this story is determining the prevalence of human hydatid cyst and different epidemiologic aspects of this disease.

Material method: Eight hundred ten samples from 6 villages and also Abhar were taken accidentally. In order to conduct the tests Antigen B was used. Samples were tested by indirect ELISA. The negative control samples were considered in wavelength 450 nanometer as Cut-Off.

Result: Of the total 810 participants in this study, 440 were female and 370 were male. Propagation of samples included 500 villages and 300 citied. From all the samples, 1 sample (0.12 percent) was positive in ELISA test. This positive belonged to a 51 year-old, illiterate, villager, housekeeper woman, and with the existence of dog and eating vegetables. There was not any significant relationship between contamination by hydatid cyst and investigated variables in this study.

Conclusion: The Present Study compared with those reported in other parts of the country, lower incidence of Hydatid cyst in Abhar region shows. Of it would be appropriate to industrial slaughter house and washing vegetables in the region and also noted.

Keywords: Hydatid cyst, Seroepidemiology, ELISA.

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-008

Seroepidemiology of human hydatidosis using AgB-ELISA test in Isfahan city and suburb Areas, Isfahan Province, central Iran

Fateme Mirhadi[1], Parisa Ilbeigi [2], Mohammad Bagher Rokni [2], Bahram Fahandaj Delgoshaei[3], Elham Shahriarirad [2]

1- Care system management in Science and research– Islamic Azad University, Science and Research Branch. Tehran. Iran.

2-Deptment of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Iran

3- Educational Administration Deputy International School of Management and Medical Information, a member of the faculty of the Department of Health Services Management, University of Medical Sciences and Health Services, Tehran, Iran

* Corresponding author: Parisa Ilbeigi

Deptment of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Iran

Email: fatememirhadi@yahoo.com

Abstract

Background: The aim of this study was to conduct a sero-epidemiological survey in Isfahan City and suburb areas, central Iran to detect the rate of human hydatidosis using ELISA test.

Material method: Overall, 635 serum samples were collected from subjects referred to different health centers in urban and rural regions of the city. Sera were analyzed using Ag-B ELISA test. Ten µg/ml antigens, serum dilutions of 1:500 and conjugate anti-human coombs with 1:10000 dilutions were utilized to perform the test. All subjects filled out a questionnaire and an informed consent. Data analysis was conducted using SPSS 18 software. Cut-off was calculat-ed as X+3 SD.

Result: Cut-off value was calculated 0.19. Seven cases (1.1%) were seropositive for hydatidosis by ELISA test. The sero-prevalence of hydatidosis was 0.27% among females and 2.24% among males (P=0.019). Age group of 60-69 years old, with 2.59% as prevalence had the highest rate of positivity. There was no significant difference as regards age groups, job, residency, contact by dog and literacy. According to job, self-employed people had the highest rate of infection as 3.05%. The sero-prevalence of infection was 1.14% in diploma and 1.13% in illiterates. As regards residency, urban life (1.49%) showed no significant difference with rural life.

Conclusion: The rate of prevalence in this region showed that necessary cautions should be taken into account to monitor the spread of human hydatidosis in this region. In comparison with other studies, the rate of infection was roughly less than other regions.

Keywords: Sero-epidemiology, Human hydatidosis, ELISA, Iran

PP-009

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-010

Evaluating the prevalence of *Toxoplasma gondii* in meat and meat products in Ahvaz by PCR method

Mahmoud Rahdar[1], Ali Reza Samarbaf-Zadeh[2], Leila Arab[1]

1-Department of Parasitology, Faculty of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

2-Department of Virology, Faculty of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

* Corresponding author: Leila Arab

Department of Parasitology, Faculty of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Email: larab128@yahoo.com

Abstract

Background: *Toxoplasma gondii* is an obligate, intracellular parasite, which is widely spread in the world. The parasite is able to infect all warm-blooded hosts including human. The infection occures via consumption of food or water containing oocytes, eating undercooked meats containing tissue cysts, and placenta. Undercooked meat consumption is one of the most important ways of *Toxoplasma* transmission especially in pregnancy period. Raw and undercooked meats have been reported responsible for 50 % of congenital toxoplasmosis. The current study was conducted to determine the prevalence of *T. gondii* in lamb and beef, and also meat products by molecular method in Ahvaz, South-west of Iran.

Material method: Totally 190 samples were collected from local retailers in Ahvaz city. Samples of tongue, heart and muscle were taken from 50 lamb and 50 beef distributors and 90 meat product samples (sausages, hamburgers and salami, 30 samples of each). Collected samples were minced by electric meat grinder. DNA was extracted from 190 meat and meat product samples by Qiagen DNA Mini Kit. Specific primers for the *T. gondii* B1 gene were used to detect the parasite in samples, by PCR method.

Result: A total of seven lamb out of 50 (14 %) and two beef out of 50 (4 %) were found as positive for *T. gondii* cyst. The parasite was not isolated from any of the meat product samples.

Conclusion: The detection of the parasite in slaughtered animals indicated that the risk still exists for food-transmitted toxoplasmosis, and consumption of raw or undercooked meat can transmit the infection to human community.

Keywords: Meat, Meat Product, *Toxoplasma*, Polymerase Chain Reaction

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-011

Study of visceral leishmaniasis in asymptomatic domestic dogs in the Meshkinshahr city, Iran

Soheila Molaie[1], Fatemeh Ghafarifar [1], Abdolhossein Dalimi [1], Mehdi Mohebali [2], Z Zarei [2], Behnaz Akhoundi [2]

1- Department of Parasitology and Entomology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

2- Deptment of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.

* Corresponding author: Soheila Molaie

Department of Parasitology and Entomology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

Email: smolaie83@gmail.com

Abstract

Background: Visceral leishmaniasis is a zoonotic disease and is considered as the most important disease in dogs. The disease has been reported in North West and South of the country. In addition to stray dogs, some apparently healthy dogs can be infected without showing any sign or symptoms in the area. In the present study, visceral leishmaniasis was investigated in dogs lacking clinical signs in Meshkinshahr city, Iran.

Material method: This study is a cross - sectional survey that conducted during the period 2011-2014. A total of 110 serum samples collected from dogs and tested by DAT assay. Then 10 dogs that showing clinical signs and 15 dogs without any clinical symptoms with positive antibody titers were autopsied and their spleens were sampled. The samples were used for smear preparation and culturing.

Result: Based on the results, among 24 dogs with clinical signs 20 cases (90%) and of 86 dogs without signs 16 cases (18.60%) found to be positive. On the other hand, smear and culture results were found to be positive in 100% and 60% of dogs with and without clinical signs respectively.

Conclusion: This proves that asymptomatic dogs like symptomatic dogs, can be effective in *L. infantum* infection and is able to maintain the transmission of the disease in endemic areas.

Keywords: Visceral leishmaniasis, dogs, clinical signs, DAT, Meshkinshahr

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-012

The Effect of Artemisinin drugs with Glucantime and Shark cartilage on promastigotes and amastigotes of *Leishmania infantum* in in vitro conditions

Soheila Molaie[1], Fatemeh Ghafarifar [1], Abdolhossein Dalimi [1], zoheir hasan saraf[1]

1- Department of Parasitology and Entomology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

* Corresponding author: Soheila Molaie

Email: smolaie83@gmail.com

Abstract

Background: Leishmaniasis is one of the neglected tropical diseases .visceral leishmaniasis is the acute form of the disease and if diagnosis and treatment left, the rate of mortality were high level. Recently the use of derivatives plant instead of chemical drugs is taken into consideration. In this study we examined effects of artemisinin with glucantim and shark cartilage on promastigotes and amastigotes of *Leishmania infantum* in in-vitro conditions and cell death.

Material method: In this experimental study the effect of Artemisinin, Glucantim and Shark cartilage was evaluated atconcentration range of (400,200,6.25,12.5,25,50,100) micro grams per ml on the *L. infantum* promastigotes and concentration range of 25, 50 on macrophages infected with *L. infantum* after 72 hrs by flow cytometry assay.

Result: In this study we used *L. infantum* strains *(MCAN / ES / 98 / LIM 877)*. IC50 of drugs Artemisinin, Glucantim and both were determined after 72 hours respectively 25, 50 micro-grams per mililiter, the number of parasites per ml in the control group was 1.65 × 106, Artemisinin at a concentration 25 was.75 × 106. The number of parasites per ml in the shark cartilage wells was very low as compared with the control group. Toxicity and survival of parasites in the promastigote and amastigote for all these drugs was measured by MTT assay results. Flow cytometry analysis showed that the percent cytotoxicity in control was 2.41% (apoptosis .41% and 2% respectively delay apoptosis and necrosis .97%. with concentration levels of 25 Artemisinin has cytotoxicity 52% (apoptosis 51 / 50% and delayed apoptosis 1.85%) and necrosis. 24% respectivly.with concentration levels of 50 Artemisinin has 53.5% (as 51.74% apoptosis , delay apoptosis 76/1%) and necrosis was.16% respectively. this data for Glucantime with concentration of 400 was13.5%, respectively. With concentration 200, cytotoxicity has 12%. With two drug Artemisinin + Glucantim combination, concentration of 25 has 59.9% and the concentration of 50, cytotoxicity level was 61% respectively. Cytotoxicity of Shark cartilage on Promastigotes was 32% (apoptosis 13.2%, delay apoptosis 18.44%) and 10.34% necrosis respectively. Cytotoxicity of these drugs for infected macrophages with concentration 25 and 50 was of 15%, 19% respectively. For combination A + G, with concentration of 50 sytotoxicity rate was 56% and with concentration of 25 was35% respectively.

Conclusion: This research indicates that Artemisinin with Glucantim has anti-Leishmania activity and can be used to study in in- vivo as a new drug. These drugs also can induce appoptosis in *leishmania infantum* paramastigotes and amastigotes.

Keywords: Artemisinin, Glucantim, Shark cartilage, *Leishmanaia infantum*, in vitro

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-013

Use of the Coconut water as a replacement for the fetal calf serum in cultivation of promastigotes of Leishmania infantum

Vahid Nasiri[1], Gholamreza Karimi[1], Habibollah Paykari[1], Shahla Rivaz [1], Gholamreza Motamedi[1]

1-Department of parasitology, Razi Vaccine and Serum Research Institute, Karaj, Alborz, Iran

* Corresponding author: Vahid Nasiri

Department of parasitology, Razi Vaccine and Serum Research Institute, Karaj, Alborz, Iran

Email: v.nasiri@modares.ac.ir

Abstract

Background: The protozoan parasites of the genus Leishmania are the causative agents of the various clinical diseases. Fetal Calf Serum (FCS) is the major part of the *Leishmania* culture media, and is the most expensive ingredient in these media. Coconut water is packed with nutrients that yield an array of health benefits.

Material method: In the present work, the efficacy of Coconut water was evaluated in the cultivation of promastigotes of *Leishmania infantum*.

Result: The results indicated that, the Coconut water enriched culture medium could not support the growth of the parasites and cannot be used for cultivation of *Leishmania infantum*.

Conclusion: According to our finds concluded that although the Coconut water is an easy available and cheap replacement but could not be used in cultivation process of *Leishmania infantum* promastigotes.

Keywords: Coconut water, Fetal Calf Serum, *Leishmania infantum*.

هشتمین کنگره بین المللی
آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-014

A survey on *Giardia duodenalis* and *Blastocystis hominis* in patients referred to a Polyclinic Taminejtemaee in Dezful, Iran

Mohammad Ansari [1], Molouk Beiromvand[1]

1-Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

* Corresponding author: Molouk Beiromvand

Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Email: m.ansari1965@yahoomail.com

Abstract

Background: *Giardia lamblia* and *Blastocystis hominis* are zoonotic intestinal protozoa with a wide distribution in the world. Human infection can occur through the fecal-oral route by ingestion of contaminated water or food. The prevalence of G. *lamblia* and *B. hominis* in developing countries is higher than developed countries. Inadequatehygiene and sanitation facilities play an important role in transmission of protozoa and helminths.The present study was conducted to investigate the presence of *G. lamblia* and *B. hominis* in patients referred to Tamin Ejtemaee polyclinic in Dezful, Khuzestan province.

Material method: During 2014-2015, four hundred frothy four patients including 209 (47.41%) male and 232 (52.6%) femalewithin age group 2–84 yearsreferred to TaminEjtemaee polyclinic in Dezful were selected to assess *Giardia lamblia* and *Blastocystis* infections. The fecal specimens were examined using direct saline smear, Lugol's iodine-staining, and Sucrose flotationtechniques. Data analysis was performed using SPSS 16 software.

Result: Intestinal parasites were detected in 31 (7%) of 441 fecal samples, including 21 (4.8%) as *G. lamblia*, 4 (0.9%) as *Entamoeba coli*, and 6 (1.4%) *B. hominis*, respectively. The presence of intestinal parasites was higher 30 (7.02%) among non educated patients than educated patients 1 (0.22%). Four hundred- ten samples were negative.

Conclusion: This investigation showed that the prevalence of 21(4.8%) as *G. lamblia* and 6 (1.4%) as *B. hominis* is may be a riskfactor for public health. Furthermore, higher infection among non educated subjects showed that implementation of a control and prevention program by local health centers and comprehensive educational programs to increase public awareness concerning intestinal parasites transmission routs is essential.

Keywords: *Giardia duodenalis*, *Blastocystis hominis*, Dezful, Taminejtemaee.

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-015

Prevalence of haemoparasites in stray dogs from Alborz, Iran

Vahid Nasiri[1], Asghar Nasiri [2], Gholamreza Karimi[1]

1-Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran

2-Karaj municipality, Belal Blvd., Tohid Sq., Karaj, Iran

* Corresponding author: Vahid Nasiri

Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran

Email: v.nasiri@modares.ac.ir

Abstract

Background: Different haemoparasites of dogs cause several diseases of public health importance .This research work is aimed to find out the prevalence of haemoparasites infections in stray dogs of Alborz Province.

Material method: Blood samples were taken and collected from cephalic or saphenous vein from 45 dogs that were registered in the Karaj municipality's dog camping and then peripheral thin blood smears were prepared and stained with Giemsa for microscopic parasitological examination.

Result: Out of 45 dogs samples analyzed, 18 were males and 27 females and out of these, none of them were positive for haemoparasites.

Conclusion: Some species of haemoparasites in dogs are also zoonotic, therefore the need for continuous surveillances on the prevalence of haemoparasites in our communities as a control strategy. There is a need for more précis molecular studies for exact determination of the presence of these parasites.

Keywords: Haemoparasites, dog, Alborz.

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-016

Frequency of *Blastocystis spp*. in Immunocompromised patients of Emam Reza Hospital, Tehran, Iran

Nahid Jalallou[1], AhmadReza Meamar[2]

1-Department of laboratory science, School of Paramedicine, AJA University

2-Department of Parasitology and Mycology, School of Medicine, Iran university of Medical Science, Tehran, Iran

* Corresponding author: Nahid Jalallou

Department of laboratory science, School of Paramedicine, AJA University

Email: Nahidjalallou@yahoo.com

Abstract

Background: *Blastocystis* is an unusual intestinal protozoan parasite of humans and many animals. It has a worldwide distribution with higher numbers being found in developing countries probably due to poor sanitation. *Blastocystis* is often the most commonly isolated organism in human faecal samples. Mainly, depending on the methods applied for *Blastocystis* detection, prevalence data in human often goes over 5% in industrialized countries and can reach as high as 76% in developing countries. Immunocompromised patients like as those receiving chemotherapy or patients with malignancy have an increased probability of acquiring parasitic infections in compare with immunocompetent persons. Although opportunistic parasitic infections generally are asymptomatic or self limited in healthy individuals, their manifestations in immunocompromised individuals are more devasting. Due to the lack of knowledge about this parasite, the aim of this survey was determination of the *Blastocystis spp.* frequency in patients with different kinds of malignancy referred to Emam Reza Hospital in compare with control individuals.

Material method: In this cross-sectional study that have been done from June 2012 to July 2013, a total of 116 stool samples were obtained from hospitalized malignant patients and 83 stool samples were collected from patients referred to hospital laboratory as a control group. The age range of patients was from 18 to 84 years. After filling out a questionnaire, stool samples transferred to School of Paramedical parasitology laboratory. Furthermore stool samples were examined directly by wet mount preparation using the saline and iodine method then concentrated with formalin-ether method and reexamined. Data was analyzed using SPSS (version 17) software and Chi-squered test.

Result: In this study a total of 199 stool samples from case and control groups were collected and examined. The frequency of *Blastocystis spp.* in case group was 17/116(14.7%), of this 14/73(19.2%) were from patients having solid tumors and 3/24 (12.5%) from those having leukemia. In spite of low frequency in case group the prevalence of this organism in control group was significantly higher 28/83(33.7%) P = 0.001.

Conclusion: The frequency of *Blastocystis spp.* in case group was low. Probably this finding is as a result of chemoprophylaxis, chemotherapy effects, regular surveillance and less exposure to infectious sources. We recommend evaluation of these patients with at least two different diagnostic methods in order to prevent possible life threatening outcomes. In addition, further studies using molecular approaches to distinguish the subtype of *Blastocystis* are needed.

Keywords: *Blastocystis spp.,* frequency, malignancy, Emam Reza Hospital.

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-017

Epidemiology of cutaneous leishmaniasis in Torbat-e Heydarieh, Khorasan Razavi

Aliakbar shamsian[1], Elham moghaddas[1], Elham poustchi[1], Abdolrahim Rezai[2], Mohamadreza Hedayatimoghadam[3], Omid Akbarzadeh[1]

1-Departments of Mycology and Parasitology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

2-Department of Immunology, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

3-Iranian Academic Center for Education, Culture & Research (ACECR), Mashhad, Iran

* Corresponding author: Aliakbar shamsian

Departments of Mycology and Parasitology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Email: ShamsianAA@mums.ac.ir

Abstract

Background: Leishmaniasis, especially cutaneous leishmaniasis is considered as an important health problem in many parts of Iran such as Torbat-e Heydarieh, in Khorasan Razavi province. Various species of leishmania are causing the leishmaniasis and identification of the parasite species is useful for the control and prevention of this disease. On the other hand microscopic examination and clinical findings aren't sufficient for identification of parasites. kDNA- PCR technique is a very reliable method to detect Leishmania species. Torbat-e Heydarieh is an important focus for cutaneous leishmaniasis and so far classical research hasn't been done about this disease in this city, we decided to identify different species of leishmania parasites causing cutaneous leishmaniasis by PCR in Torbat-e-Heydarieh.

Material method: Slide smears obtained from skin lesions of 70 patients suspected to leishmaniasis. Direct microscopy and PCR performed using specific kDNA primers. Data analyzed with SPSS.

Result: Among 70 persons with skin ulcers suspected to CL, the result of direct smear of 57(81%) samples was positive. PCR band were observed in 60(86%) of examined samples in which 53 bands identified for L. tropica and 7 bands for L. major.

Conclusion: Both ACL and ZCL are present in Torbat-e Heydarieh. L. tropica is the dominant causative species for cutaneous Leishmaniasis.

Keywords: Cutaneous leishmaniasis, L. tropica, L. major, Torbat-e Heydarieh , PCR, ACL, ZCL

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-018

Identification of *Leishmania* species causing cutaneous Leishmaniasis in Gonabad-Bardaskan-Kashmar cities by molecular method during 2015

Aliakbar shamsian[1], Elham moghaddas[1], Elham poustchi[1], Mohamd Reza Hedayati[2], Mohamd Reza Bagherpor[1]

1-Departments of Mycology and Parasitology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

2-Iranian Academic Center for Education, Culture & Research (ACECR), Mashhad, Iran

* Corresponding author: Aliakbar shamsian

Departments of Mycology and Parasitology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Email: ShamsianAA@mums.ac.ir

Abstract

Background: About 90% of cutaneous leishmaniasis (CL) cases are reported from seven countries including Iran. In this study, we aimed to investigate the cutaneous leishmaniasis species by kDNA-PCR method in Gonabad, Bardaskan, Kashmar cities in Razavi Khorasan province, Iran.

Material method: During the study, 93 suspected patients with CL, who referred to the Dermatology Research Center at these cities, were evaluated based on age, clinical forms, place of residence and species of this protozoon. Direct microscopy and PCR performed using specific kDNA primers. Data were analyzed using SPSS software.

Result: Cutaneous leishmaniasis was prevalent among both with higher incidence men (57%) and in patients aged 21-30 years (36%). Cutaneous leishmaniasis was the most prevalent clinical form observed as papule (75%) and in hands (37%) ($p< 0.0001$). Unique lesions were present in 57% of cases. There was no statistically significant association between leishmanial species and living places. Among 93 persons with skin ulcers suspected to CL, the results of 81 direct smears were positive. PCR bands were observed in 84 examined samples of which 68 bands were identified for *L. tropica* and 16 bands for *L. major*.

Conclusion: Previous Epidemiologic studies have indicated that ACL is the only dominant CL form presented in the center and south of Khorasan. However, this study introduced new foci of ZCL in these areas.

Keywords: Cutaneous leishmaniasis, *L. tropica*, *L. major*, Gonabad, Bradaskan, Kashmar, PCR, ACL, ZCL

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-019

Compare larvicidal effect of methanol extract *Hyoscyamus niger* and *Nerium oleander* flowers on the Anopheles spplarvae

Amin Baharshahi[1], Mahmoodreza Behravan[2]

1-Department of Biology, University of Hakim Sabzevari, Sabzevar, Iran

2-Department of parasitology, school of Paramedicine, Birjand University of Medical Science, Birjand, Iran

* Corresponding author: Amin Baharshahi

Department of Biology, University of Hakim Sabzevari, Sabzevar, Iran

Email: amin.baharshahi@outlook.com

Abstract

Background: Malaria is an infectious disease by fever and chills, anemia and splenomegaly genus *Plasmodium* parasite is the agent it. One of the easiest and least expensive methods for prevent this disease is removing the vector that usually by been done insecticides and chemical pesticides , but now days due to the damaging effects of by toxic chemicals is currently trying to organic toxic and plant compounds used to combat the pests. So in this study used from the *Hyoscyamus niger* and *Nerium oleander* to destroy the larvae of this insect and positive results were compared these two plants together.

Material method: Flower of *Hyoscyamus niger* and *Nerium oleander* collected and dried to extraction by using methanol the Rotary Evaporator. Mosquito larvae collected from stagnant water pits and ponds around the Birjand city and order to apply the relevant tests identity and isolated Anopheles spp mosquito larvae.

Result: *Hyoscyamus niger* and Nerium oleander extract both had a positive effect on the elimination of *Anopheles spp*. larvae. After 48 hours LD50 for obtained *Hyoscyamus niger* 0.26 ppm and for Nerium oleander 2.87 ppm that indicate *Hyoscyamus niger* extract have more power for the eliminating mosquito larvae .Also *Hyoscyamus niger* had the best time effect that was between the period of 12-24 hours though the best time was for *Nerium oleander* 24-48 hours.

Conclusion: Given that the *Hyoscyamus niger* flower extract in a shorter time, more power to eliminating the larvae of *Anopheles spp.* in the *Nerium oleander* plant, Recommended can be used as an organic toxin to be used in order to eliminate the larvae of *Anopheles spp*.

Keywords: Malaria, *Anopheles spp.* larvae, *Hyoscyamus niger*, *Nerium oleander*

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-020

Trichinella infection in wildlife in Mashhad

Ali Akbar Shamsian[1], Elham Moghaddas[1], Abdolmajid Fata[1], Majid Derakhshani [2], Elham poustchi[1]

1-Departments of Parasitology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

2- Departments of Parasitology, School of Medicine, Mazandaran University of Medical Sciences, Mazandaran, Iran

* Corresponding author: Ali Akbar Shamsian

Departments of Parasitology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Email: ShamsianAA@mums.ac.ir

Abstract

Background: Trichinellosis is one of the most important foodborne parasitic zoonoses caused by ingestion of undercooked meat harboring parasites of the genus Trichinella. The objective of this investigation was to detect the presence of *Trichinella* in some carnivores of Mashhad in northeast of Iran and to identify *Trichinella* species circulating in this area.

Material method: The present study was carried out using muscle tissue collected from 150 stray dogs, 3 wild boars, two foxes and 15 jackal captured by direct smear observation by microscope and artificial digestion and experimental infection of rat in Mashhad City, province of Khorasan Razavi, Iran.

Result: *Trichinella* larvae were detected in two stray dogs and one Jackal.

Conclusion: This is the important report of identification of *Trichinella* in wildlife in Iran. Due to social, economic and religious factors in Iran, the risk of trichinellosis infection among humans is low but sporadic cases still exists among people that consume wild boar meat in some areas.

Keywords: Trichinellosis, epidemiology, carnivores, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-021

Frequency of parasitic infections in patients referred to central laboratory in Heris, east Azerbaijan province, Iran

Roghayeh Ghoyouchi [1], Ghoyouchi Roghayeh[1], Berahmat Reza[1], Mahami-Oskouei Mahmood[1], Parsaei Mehdi[1], Mikaeili Tahereh [1], montakhabi-Oskouei Naeimeh[2], Alizadeh Mehdi[8], Bagheri Reza[2]

1-Department of Parasitology, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran

2- Central laboratory, Heris, Eeast Azebaijan, Iran

* Corresponding author: Roghayeh Ghoyouchi

Department of Parasitology, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran

Email: rghoyouchi@gmail.com

Abstract

Background: Parasitic infections are the most important health problems in many developing communities, especially in IRAN. The rate of parasitic infections is an indicator of health in any society. Therefore in this study, the frequency of parasites in patients referred to the central laboratory of Heris was analyzed from 2014 to 2015.

Material method: This study was carried out on 1497 stool samples which were collected from patients who referred to the central laboratory of Heris. All of stool samples examined using both direct microscopy and formalin-ether methods. Scotch test as a best way to diagnose pinworm infection and urine sediment samples for determine Trichomonas vaginalis were used in the present investigation.

Result: Overall, 12.75% of collected samples were positive. *Giardia lamblia* and *Entamoeba histolytica/dispar* had the highest and the lowest frequency with 3/5% and 0/06% respectively. Frequency of different parasites was determined as follows: *Blastocystis Hominis* 2/6%, *Endolimax nana* 2/3%, *Entamoeba coli* 1/4%, *Iodamoeba butschlii* 1/1%, *Trichomonas hominis* 0/4%, pinworm eggs 7/69 % and *Trichomonas vaginalis* 0/73%.

Conclusion: According to the results, control and prevention of parasitic infections it seems necessary. In order to public awareness for health promotion, implementation of health interventions at the community level is inevitable.

Keywords: parasitic infections, intestinal protozoa, prevalence, Heris, Iran.

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-022

Prevalence of *Enterobius vermicularis* among kindergartens and preschool children in Mazandaran Province, North of Iran

SeifAli mahdavi[1]

1-Mazandaran University of Medical Sciences, Sari, Iran

* Corresponding author: SeifAli mahdavi

Mazandaran University of Medical Sciences, Sari, Iran

Email:seifalimahdavi@gmail.com

Abstract

Background: *Enterobiasis (Oxyuriasis)* is probably the most common helminth to infect humans. Among different age groups, prevalence of *Enterobius vermicularis* in children is higher compared to adults. Oxyuriasis is one of the most significant parasitic diseases of children. This nematode in children can result in loss of appetite, insomnia, grinding of the teeth, restlessness, endometritis, abdominal cramps, diarrhea and etc.. Due to important complications of this parasite, the objective of the current study was to determine the prevalence of Enterobiasis in kindergarten and preschool children of Amol, Mazandaran Province, North of Iran.

Material method: A total of 462 children from 32 kindergartens of Amol were examined for the prevalence of *E. vermicularis* infection, 2013. Adhesive cello-tape anal swab method was trained to parents for sampling. In addition, a questionnaire was designed and filled out to collect demographic information for each individual. Data were analyzed using Chi-square test and multivariate logistic regression for each risk factor.

Result: The overall prevalence of *E. vermicularis* infection was 7.1% (33). Although infection with *E. vermicularis* in girls 7.9% was higher than boys 6.3% , no statistically significant relation was observed between gender and age ($p > 0.05$) whereas binary logistic regression showed significant association between enterobiasis and age ($p < 0.05$).

Conclusion: The findings indicated that the prevalence of *E. vermicularis* in kindergarten and preschool children is relatively high and still is an important health problem and should not be underestimated due to being highly contagious. Therefore, educational programs and mass treatment should be carried out in order to reduce infection in this area and regular parasitology test and attention to personal hygiene in kindergarten and preschool is of great importance.

Keywords: *Enterobius vermicularis*, *Oxyuris*, Prevalence, children, intestinal infection, primary schools

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-023

The prevalence of *Trichomonas vaginalis* infection in Ilam women in 2015

Sasan Nikpay[1], Nabi Yari[1], Milad Azami[1], Jahangir Abdi[2]

1-Student Research Committee, Ilam University of Medical Sciences, Ilam, Iran

2-Department of Parasitology, Faculty of Medicine, Ilam University of Medical Sciences, Ilam, Iran

* Corresponding author: Sasan Nikpay

Student Research Committee, Ilam University of Medical Sciences, Ilam, Iran

Email:sasan.nikpay1372@gmail.com

Abstract

Background: *Trichomonas vaginalis* infection is one of the most common curable sexually transmitted infections (STIs). It creates adverse effects and facilitates transferring HIV, premature delivery and low birth weight. According to studies, 180 million people worldwide are infected with this parasite. This study aims at estimating the prevalence of *Trichomonas vaginalis* among the women referring to Ilam health centers

Material method: This is a cross-sectional study conducted on 481 women referring to central laboratories and laboratory of Mustafa Khomeini Hospital in the first six months of 2015. Demographic information was collected by questionnaire. Sampling was done by two Jute Swaps. One of them was used for direct smear and the other for culture-specific medium. Finally, the results of tests and questionnaires were entered into SPSS 16 and analyzed by Chi-2 test.

Result: The result of culturing *Trichomonas vaginalis* was positive in 7 cases (1.45%). The highest prevalence of *Trichomonas vaginalis* in women was observed in the age group 30-40 years with 4 cases (8%). The lowest prevalence was also related to over-45-year-old patients Group. There was a statistically significant correlation between education level and infection to *Trichomonas vaginalis* in women. (P = 0.49) According to contraceptive methods, the highest prevalence of *Trichomonas vaginalis* was associated with Tubal Ligation in 4 cases (83%) and Condom in 3 cases (62%).

Conclusion: The prevalence of Trichomoniasis was low in in Ilam women but high among women who have used Tubal Ligation and condom to prevent pregnancy. Therefore, more attention from healthcare centers is required for appropriate education to women about contraceptive methods and use of protective equipment.

Keywords: *Trichomonas vaginalis*, Prevalence, Women, Ilam

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-024

Examine the epidemiological situation in the city of Susa, based on the reasons for the outbreak of cutaneous leishmaniasis in 2014

Narjes Davoudi[1], Atefeh Etebari[1], Ezatallah Ghasemi[2]

1- Student Research Committee, Dezful University of Medical Sciences, Dezful, Iran

2-Dezful University of Medical Sciences, Dezful, Iran

* Corresponding author: Narjes Davoudi

Student Research Committee, Dezful University of Medical Sciences, Dezful, Iran

Email: n72d1392@gmail.com

Abstract

Background: Despite the increasing development of medical science in the field of control of infectious diseases, parasitic diseases such as leishmaniasis is still the cause of death, disability of the most important health problems throughout the world, especially in developing countries is considered. So that the World Health Organization (WHO) this disease has Dnyamrfy in row six major diseases. According to the Center for Disease Control and management of the Ministry of Health, the number of cases of leishmaniasis in the country, more than twenty thousand cases per year is estimated on the basis of investigations carried out exact figures of 4 to5 Brabrrqm reported. One of the recognized centers of Leishmaniasis, is the city of Susa in Khuzestan province.The World Health Organization study and research on various aspects of the disease has placed recommend and helpless. This study aim evaluates the epidemiological aspects of cutaneous leishmaniasis in the city of Susa. It has been done on the basis of the reasons for the outbreak.

Material method: This cross sectional study in 2014 (Cross sectional)on all patients with cutaneous leishmaniasis in the city of Susa referred to health centers in the direction they had been completed forms epidemiologic study was conducted. Data on relevant variables and statistical analysis was performed using the software spss ver16 statistical tests.

Result: The results of this study showed that the incidence of the disease in 2014 compared to 2012, increased 74% in the second half of this outbreak and spread of 42% was observed.The most common age group affected by 5_15 year olds (31% / 33),the following 5 years (30/92%), over25years (22/73%), 15_25 (15/01%), respectively. Based on reviews made to appear, the reasons for the outbreak of this disease can be established pattern of transmission and the incidence of cutaneous leishmaniasis city, earthquakes continued to increase early in the year 2014 human bites by sand flies that carry the disease. As well as changes in climatic conditions such as rainfall in the spawning season of disease-carrying mosquitoes and reproduction reservoirs noted Tatera indica.

Conclusion: Considering outbreak of the disease in the city of Susa, which is emerged in ages5 to 15 years,Since this age group as one of the most important groups at risk of disease whose immune system is incomplete because they can cause complex conditions, The need to improve public health training in the centers of disease,serious efforts to be made.City health center through the active participation of health workers interact with the Department of Education can have an important role in advancing this important.Also molecular tests such as PCR-RFLP to identify the species responsible for the disease to take preventive measures recommended.

Keywords: Cutaneous leishmaniasis, causes flooding, Susa, PCR-RFLP

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-025

Evaluation of the effectiveness of ethanolic extract of *Curcuma longa* against *plasmodium berghei* in comparison with chloroquine in sourian mice using invivo tests

Peyman Heydarian[1], Mehdi Nateghpour[1], Afsane Motevalli Haghi[1], Leila Farivar[1], Effat Souri[2], Nahideh mazhari[1]

1-Department of Medical Parasitology and Mycology, School of Public Health, Tehran university of Medical Sciences, Tehran, Iran

2-Department of Chemistry, Pharmacy Faculty, Tehran University of Medical Sciences, Tehran, Iran

* Corresponding author: Peyman Heydarian

Department of Medical Parasitology and Mycology, School of Public Health, Tehran university of Medical Sciences, Tehran, Iran

Email: peiman.heydaryan@yahoo.com

Abstract

Background: Given the potential importance of indigenous herbal medicines that can have an acceptable impact on the malaria parasite, *Plasmodium berghei* effect of alcohol extract *Curcuma longa* on experimentally in mice were studied and compared with the effect of chloroquine.

Material method: In this study 40 mice were divided into 8 groups, the seven groups were infected with *P. bergei* and were treated with alcoholic extract of *Curcuma longa* and chloroquine with Rane test method.

Result: The results showed different concentrations of *Curcuma longa* have different effects in reducing parasitaemia. Although all concentrations used significantly reduce the number of parasites in infected mice, Concentration of 400 mg/ kg significantly was more effective. The effect of chloroquine on the parasite under study was more decisive and more effective than different concentrations of the alcoholic extract of *Curcuma longa*.

Conclusion: This study shows that an alcoholic extract of *Curcuma longa* effect on the parasite. It seems that if the concentration 400 mg/ kg and 200mg/ kg of *Curcuma longa* used achieved better results.

Keywords: *Plasmodium berghei*, *Curcuma longa*, treatment

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-026

Immuno-reactivity of *Leishmania major* TSA recombinant protein vaccine candidate formulated with Freund's adjuvant, Chitosan and BCG-Alum

Fatemeh Tabatabaei [1], Narges Khabaz zadeh Tehrani [2], Somayeh Zarrati [2], Abbas ali Imani Fooladi [3], Mehdi Mahdavi [4]

1-Department of Parasitology and Mycology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

2- Department of Microbiology, Science & Research branch, Islamic Azad University, Tehran,

3- Department of Microbiology, Research Center, Baqiyatallah University of Medical Sciences, Teheran, Iran

4- Department of Virology, Pasteur Institute of Iran,Tehran, Iran

* Corresponding author: Fatemeh Tabatabaei

Department of Parasitology and Mycology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

Email: tabatabaei.f@iums.ac.ir

Abstract

Background: *Leishmania major* is obligate intracellular parasite. Leishmaniasis is an important disease in humans.There is no effective vaccine for Leishmaniasis. In this regard, Designing of potential vaccine candidates is highly demanded. In present study TSA (Thiol –specific – antioxidant) recombinant protein was expressed in E.coli and its immunogenicity in combination with different formulation of adjuvants was evaluated in BALB/c mice initially.

Material method: Plasmid encoding TSA gene was sub-cloned into the PET28a expression vector and recombinant TSA was over expressed in *BL21 E. coli* by addition of IPTG and confirmed with western-blotting and purification carried out with Ni-NTA column . Groups of BALB/c mice (n=10) were immunized with candidate vaccine adjuvanted in Complete Freund's adjuvant , BCG-Alum and Chitosan and 21 days after final immunization challenged with parasite. Lymphocyte proliferation was evaluated with Brdu and IL-4, IFN- γ cytokines and total antibody evaluated with ELISA test. The wound diameter was measured with calipers and the parasite burden was assessed by spleen culture.

Result: Immunization of mice with the vaccinated groups led to a significant increase in IFN-γ cytokine level, lymphocyte proliferation and antibody responses. There was considerable reduction in lesion diameter in the TSA/chitosan group in comparison to the control groups. A significant differences observed in all the vaccinated groups in parasite burden after 8 weeks challenge with the parasite as compared to the control groups.

Conclusion: This study showed that immunization with TSA antigen with different adjuvants is suitable for further study as vaccine candidate against Leishmaniasis.

Keywords: TSA, adjuvant, chitosan, BCG-Alum, Leishmaniasis

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-027

An epidemiological study of cutaneous leishmaniasis in the city Dashti (Bushehr) 2011 to 2013

Javad Namrudi[1], Mojtaba Moghatl[1], Reza Someeh[1]

1-Department of Medical Parasitology & Mycology, Medical Faculty, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

* Corresponding author: Javad Namrudi

Department of Medical Parasitology & Mycology, Medical Faculty, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

Email: javad.namrodi@yahoo.com

Abstract

Background: Leishmaniasis is considered as a major healthcare problem in Iran. Given the fact that epidemiological studies are effective in disease control and preventive measures, the present research aims at epidemiological study of cutaneous lieshmanias in Dashti city (Bushehr) in past 3 years

Material method: This cross-sectional study was conducted on patients with cutaneous leishmaniasis during the past 3 years in Dashti's (Bushehr) health center. As for the procedure of the study, the registered demographic and epidemiological data of patients at Dashti's health centers was extracted and analyzed by the software SPSS 18

Result: Out of the total of 20 patients, there were 9 males (45%) and 11 females (55%). Majority of the patients were in the age range of birth to 4, and a smaller number of patients were in the age range of 40 to 63. The lesion in most of the cases was on the face and body organs. Moreover, the majority of patients had one lesion. The sampled population in this study was from Iranian patients constituting the majority of population 8 patients (40%) resided in the urban regions, and 12 patients (60%) resided in the villages. The highest numbers of cases with cutaneous leishmaniasis were reported in 2011 and the lowest number of them was reported in 2013

Conclusion: According to the previous studies, frequency of the disease in the city of Dashti (Bushehr) has followed a downward trend during years of 2011 to 2013. This may indicate that health education and personal hygiene on the part of people has drastically improved.

Keywords: Epidemiology, cutaneous leishmaniasis, Dashti, Bushehr

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-028

Prevalence of *Toxocara canis* egg in public parks in Arak city, Iran

Sareh mohamadi[1], Zahra Eslamirad[2], Reza hajihossein[2], Ghazaleh Shakibamajd[3], Sosan Zare[3], Mojtaba Didehdar[2]

1-Department of Microbiology, Islamic Azad University, Arak Branch, Arak, Iran

2-Department of Medical Parasitology and Mycology, Arak University of Medical Sciences

3-Department of Laboratory Sciences, Islamic Azad University, Arak Branch, Arak, Iran

* Corresponding author: Mojtaba Didehdar

Department of Medical Parasitology and Mycology, Arak University of Medical Sciences

Email: didehdar_m@yahoo.com

Abstract

Background: Toxocariasis is one of the most important zoonotic diseases caused by *Toxocara* larva stage in humans. One of the major transmission routes of infection, especially in children is contact with soil parks, during play. The purpose of this study was to determine the contamination of parks soil with *Toxocara* eggs in Arak city.

Material method: Sixty samples of soil were collected from 15 parks. The samples were examined for *Toxocara spp*. eggs by modified floatation method using saturated sucrose. The results were analyzed using SPSS version 17.

Result: five (8.3%) out of 60 samples were infected with *Toxocara spp.* eggs. Four of 15 parks were infected. The most contamination was found in footwork and rest location.

Conclusion: Low levels the contamination of Arak public parks soil with *Toxocara* species eggs, may be due to low levels of infection in dogs and cats in Arak city.

Keywords: Toxocaraiasis, *Toxocara*, soil contamination, public park, Arak, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-029

Toxoplasmosis and Alzheimer's disease: Evaluation of potential relationship among the patients

Shirzad Fallahi [1], Mohammad Menati Rashno[2], Parviz Bahrami[3]

1-Department of Medical Parasitology and Mycology, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, Iran

2-Department of Biotechnology, Collage of Sciences, Islamic Azad University, Damghan Branch, Damghan, Iran

3-Department of Internal Medicine, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, Iran

* Corresponding author: Shirzad Fallahi

Department of Medical Parasitology and Mycology, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, Iran

Email: Shfupdate@gmail.com

Abstract

Background: Toxoplasmosis is one of the most important common zoonotic diseases among humans and animals. Almost one-third of the world's population is infected with *Toxoplasma gondii*. Alzheimer's disease is the most well known neurodegenerative disease. Due to the high prevalence of Toxoplasmosis in Iran and the evidence about the effect of *Toxoplasma gondii* on neurodegenerative diseases, this study aimed to investigate the *Toxoplasma gondii* infection in patients with Alzheimer's disease by serological and molecular methods.

Material method: In the present study, after the election of Alzheimer's patients and the control group under supervision of neurology specialist, the blood samples were taken and transferred to the laboratory on side the ice and under the cold chain. After separation the serum and buffy coat from samples by centrifugation, the DNA was extracted from buffy coat by using the DNA extraction kit. The specific-*Toxoplasma* IgM and IgG antibodies were assessed in serum samples by using the commercial ELISA kits. Then, by using the specific primers for B1 gene of *Toxoplasma* and a thermal cycler the desired region was amplified. Finally, to check the PCR products electrophoresis on 2% agarose gel stained with DNA safe stain was used. In order to verification of the PCR results, PCR products were sent for sequencing.

Result: The overall prevalence of *Toxoplasma gondii* infection in Alzheimer's patients by serological (ELISA) and molecular (PCR) methods was 66/6% (58/87) and 52/8% (46/87) respectively. In the control group, the prevalence of *Toxoplasma gondii* infection by serological and molecular assays was 56/32% (49/87) and 40/2% (35/87) respectively. In this study, there was no significant association between toxoplasmosis infection and Alzheimer's disease. However, there was a significant relationship between the age, sex, location and type of feeds with the Toxoplasma infection among the two cases and control groups which can be considered as risk factors of Alzheimer's disease.

Conclusion: The higher prevalence of *Toxoplasma gondii* infection in Alzheimer's patients compared with the control group; show the potential impact of parasite on Alzheimer's disease and exacerbation of symptoms. This requires special attention of specialist doctors and patient relevant.

Keywords: Toxoplasmosis, Alzheimer's disease, serological, molecular

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-030

The effect of methanolic extract from *Quercus infectoria* galls on the promastigotes and amastigotes of *Leishmania major (MRHO/IR/75/ER)* in vitro

Mansour Dabirzadeh[1], Asghar Farghi Yamchi1[1], Yahya Maroufi[1]

1-Department of Parasitology and Mycology, Zabol University of Medical Sciences, Zabol, Iran

* Corresponding author: Mansour Dabirzadeh

Department of Parasitology and Mycology, Zabol University of Medical Sciences, Zabol, Iran

Email: mdabirzadeh20002000@yahoo.com

Abstract

Background: *Leishmania major* is a parasitic flagellate protozoan that causes Leishmaniasis with cutaneous clinical symptoms. Pentavalent antimony compounds are first-line treatments for Leishmaniasis, while the applications for these diseases are associated with numerous limitations and side effects. Therefore, it is necessary to find drug compounds with herbal origins that have quick-acting, beneficial efficacy and few side effects without resistance. In this research, the effectiveness of methanol extract from oak galls was evaluated in the treatment of the promastigotes and amastigotes of Leishmania major in vitro.

Material method: The present study is an experimental research that evaluated the effects of 10, 100, 500, and 1000µg/ml concentrations of methanol extract from oak galls and 100, 500, 1000, 10000µg/ml concentrations of Glucantime on *Leishmania major* promastigotes using direct cell counting and MTT assay. Each group was reviewed with four repetitions. Then, the extract was added to macrophages infected with amastigotes at concentrations of 1000, 500, 75µg/ml and Glucantime whit 10000, 500, 221µg/ml, the mean number of amastigotes in infected macrophages was calculated after 24 and 48 hours. Data was analyzed using SPSS software version 16 and one- way ANOVA test.

Result: The half maximal inhibitory concentration) IC50 (were 75µg/ml after 24 hours of oak gall methanolic extract and 221µg/ml of Glucantime. The mean numbers of amastigotes per macrophage after 24 hours in the control group and in the oak gall group with concentrations of 75, 500 and 1000µg/ml and Glucantime group with concentrations 221,1000,10000 µg/ml were 3.52, 2.63, 1.57, 0.9, 2.71, 1.5, and 0.85 respectively.

Conclusion: This method, inhibition of intracellular and extracellular growth of *L. major* was demonstrated suggesting that, plant drugs with efficacy and safe products can be applied as new treatment for cutaneous leishmaniasis.

Keywords: *Leishmania major*, amastigotes, promastigotes, oak galls

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-031

Demography of pregnant women referred to Abadan oil company health clinics for toxoplasmosis

Sharif Maraghi[1], Ali Sameri[2]

1-Ahwaz Jundishapur University of Medical Sciences, Ahwaz, Iran

2-Central laboratory, Abadan Oil Company Hospital, Abadan, Iran

* Corresponding author: Sharif Maraghi

Ahwaz Jundishapur University of Medical Sciences, Ahwaz, Iran

Email: maraghis@gmail.com

Abstract

Background: Toxoplasmosis is worldwide infection caused by the protozoan, *Toxoplasma gondii*, which is an obligate intracellular parasite of wide range of land and sea mammals and various species of birds as intermediate hosts with its definitive host being the cat. The aim of this research was study the correlation between the demography and frequency of anti- *Toxplasma gondii* antibodies (Ig G and Ig M) in pregnant women referred to health clinics of Abadan Oil Company.

Material method: Serum sample of 300 pregnant women were collected and anti- *Toxoplasma* antibodies were assessed by ELISA test and a questionnaire was filled for each subject.

Result: The frequency of anti- *Toxoplasma* IgG and IgM antibodies in pregnant women were 20.7 % and 2 % respectively. 2 cases (0.7%) were positive for both IgG and IgM and in 2 (0.7%) cases were IgG positive and IgM trace. There was no correlation between the positivity and access to safe drinking water and health, washed and disinfected clean fruits and vegetables, consumption of raw or half cooked meat, abortion, Consumption of raw eggs, residential area, education and job ($p>0.05$), but there was correlation between keeping cat at home, unpasteurized milk dairy products, using special glove while house gardening and age ($p<0.05$).

Conclusion: Toxoplasmosis is a major health problem in immunocompromised patients and infected pregnant women and can cause severe defects. Measures should be taken to promote awareness of toxoplasmosis through medical services, health education, mass media and schools. Women should be tested for toxoplasmosis before the pregnancy and in the first trimester of pregnancy.

Keywords: Demography, toxoplasmosis, *Toxoplasma gondii*, pregnancy, antibody

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-032

Effect of acute toxoplasmosis infection on anxiety in rats: an experimental study

Tayebe Shamsi ahsan[1], Mohammad Fallah[2], *Tayebe Shamsi Ehsan[3], Amirhossein Maghsood[2], Iraj Salehi[4], Hossein rezai[3]

1-Hamadan University of Medical Science, Hamadan, Iran

2-Depaerment of Parasitology and Mycology, School of Medicine, Hamadan University of Medical Science, Hamadan, Iran

3- Student Research Center, Hamadan of Medical Science, Hamadan, Iran

4-Deptment of Physiology, School of Medicine, Hamadan University of Medical Science, Hamadan, Iran

* Corresponding author: Tayebe Shamsi ahsan

Student Research Center, Hamadan of Medical Science, Hamadan, Iran

Email: shams.tayebe@gmail.com

Abstract

Background: *Toxoplasma gondii* is an obligate intracellular protozoa and its distribution. These protozoa could parasitize all the nucleate cells of its hosts. Its ability of infecting different cells and organs, including CNS, might affects the host behavior. Some studies have suggested that the parasite also could alters the behavior of their intermediate rodent hosts (mice and rats), increasing their chance of being predated by cats. The present study was mainly designed to investigate the effect of *T. gondii* acute infection on anxiety by using animal model.

Material method: The study was carried out on forty male rats. Rats were included four groups: uninfected animals as control group1, infected control group2, dexamethasone receiving group, and treatment with Co-trimoxazole group. Food and water were freely available and room temperature was maintained at 22–25 ◦C, light was on from 7A.M. to 7 P.M.Wistar rats were inoculated i.p with *T.gondii RH* strain of 106 tachyzoites. The Rats were tested at day 14 post infection. The elevated plus maze used for the observing the animals' behaviors for 10 minutes. The number of entries in the open and closed arms and the time spent in open and closed arms were recorded. Anxiety was measured as the mean of time spent by animals in the open arm during 10-min test. All data were shown as the mean ± S.D. Statistical analysis of the data for multiple comparisons were performed by one-way ANOVA. $P < 0.05$ was considered statistically significant and $P < 0.01$ was considered highly significant.

Result: In the plus-maze test, infected control rats had a significantly higher level of open arm exploration in comparison to group that received Dexamethasone, treatment with Co-trimoxazole and uninfected control control ($p <0.05$). It was found also, infected control group had a significantly more entries to close arms than the group that receiving dexamethasone and treatment with Co- trimoxazole group ($p <0.00$). While there was no significant differences in time spent in the closed arms ($p<0.05$). The results showed that infected control rats had a significantly high activity than the uninfected control group that receiving dexamethasone and treatment with Co-trimoxazole group ($p <0.000$).

Conclusion: This study indicated that, the acute *T. gondii* infection in rats may induce some degree of anxiety. The produced stress may associate with the invasive phase of toxoplasmosis that may induce a relative increase of blood flow in limbic areas. Acute infection with *Toxoplasma* may cause increase the total activity of infected rats. Drug treatment probably reduces the activity of the animal.

Keywords: Toxoplasmosis, anxiety, acute infection, animal model

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-033

The study of *Trichomonas vaginalis* infection in pregnant women referred to the Hamadan Health Center Laboratory, 2015

Mohammad Matini[1], Zarifeh Akbari[2]

1-Department of Medical Parasitology and Mycology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

2-Students Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

* Corresponding author: Zarifeh Akbari

Students Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

Email: zarifehakbari94@gmail.com

Abstract

Background: The flagellate protozoa, *Trichomonas vaginalis*, is the causative agent of urogenital trichomoniasis, the most common non-viral sexually transmitted infection.The World Health Organization (WHO) estimates that nearly 90% of infections occur among people living in resource-limited settings. Trichomoniasis is positively associated with increased risk for adverse outcome pregnancy, pelvic inflammatory disease, invasive cervical and prostatic cancer and susceptibility to HIV transmission. The infection in women can be accompanied by broad range of symptoms, ranging from severe vaginitis with a copious frothy discharge to an asymptomatic carrier state, observed in nearly 50% of cases. This study was conducted to determine the frequency of *T. vaginalis* infection in pregnant women referred to the Hamadan Health Center Laboratory in Hamadan, west of Iran.

Material method: In this cross-sectional study a total of 1200 urine samples were collected from pregnant women who referred to the Hamadan Health Center Laboratory, in 2015. The urine samples were examined for detection of *T. vaginalis* by using direct microscopic exami¬nation and Dorset's culture medium in this manner: 10 ml of urine samples were poured in a screw-capped, sterile tube and centrifuged at 1,000 × g for 5 min. Then the supernatant was discarded and the sediment resuspended in 5 ml of sterile normal saline and then centrifuged. Finally the supernatant was discarded and one drop of the sediment was used for direct smear under the light microscope, at low (×100) and high (×400) powers and the rest was used for cultivation in Dorset's culture medium. The culture medium was tested daily up to 7 days until they turned positive.

Result: Outcomes of two diagnostic methods demonstrated six infected individuals for *T. vaginalis* infection (0.5%). Although, two of infected patients (0.17%) were diagnosed by wet mount technique. The all women suffered from at least one of the signs and symptoms of trichomoniasis. The highest infection rate was in the age group 25-35 years (4/6, 66.6%) that was statistically significant.They signs and symptoms in this study that were reported included itching, dysuria, dyspareunia and inflammation of the genital tract. Symptoms varied among the patients; however, the most and the least complaints were dicharge (83.3%) dysuria and irritation (33.3%), respectively. Our study showed a signifi¬cant correlation between T. vaginalis and watery, frothy vaginal discharge. In the present study discharge, itching, Prevention before pregnancy and consistencythat was statistically significant ($P<0.05$)

Conclusion: According to the results, prevalence of trichomoniasis is considerable in the pregnant women participated in the study and because of medically important complications of trichomoniasis and adverse outcome pregnancy, there is a great need for effective comprehensive sexuality education programs in the community and *T. vaginalis* infection screening in pregnant women. This is probably related to the higher level of sexual activity in these women and maybe also due to the transmission from their husbands.However, the condom use is associated with lower prevalence of trichomoniasis and other sexually transmitted diseases.This presents an important public health problem, which should be drawn to the attention ofthe public as well as health authorities.

Keywords: Hamadan, Prevalence, Pregnant Women, *Trichomonas vaginalis*

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-034

Study of *Cysticercus bovis* in Cattle slaughter- house of Bistoons Kermanshah

Naser Nazari[1], Masoud Gholami[2]

1- Deptment of Parasitology and Mycology, Medical School, Kermanshah University of Medical Sciences, Kermanshah Iran
2- Kermanshah University of Medical Sciences, Kermanshah Iran

* Corresponding author: Naser Nazari

Deptment of Parasitology and Mycology, Medical School, Kermanshah University of Medical Sciences, Kermanshah Iran

Email: N.Nazari@gmail.com

Abstract

Background: *Cysticercus bovis* (formerly known as Beef Measles) causes small cysts in the muscles of cattle. *Cysticercus bovis* are the intermediate stage in the life cycle of a human tapeworm (*Taenia saginata*). Cattle may also become infected by eating foodstuffs or concentrates that have been contaminated by human faeces. An affected person can remain infected for life unless treated. The human must get the tapeworm from cattle .This study was performed to determine the prevalence of cysticercosis in traps in slaughterhouses of Kermanshah since 2012 to 2014.

Material method: In this descriptive cross-sectional study, 83929 traps in slaughterhouses of Kermanshah since 2012 to 2014 were enrolled and the prevalence rate of cysticercosis in traps was determined.

Result: In this study, 67 (0.08 %) out of 83929 of slaughtered cattle were contaminated with *Cysticercus bovis* during the 2012-2014

Conclusion: Totally, according to the obtained results, it may be concluded that the prevalence rate of cysticercosis in traps in slaughterhouses of Kermanshah since 2012 to 2014 was relatively low.

Keywords: *Cysticercus bovis*, Traps, slaughtered cattle, Kermanshah

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-035

Consideration of effectiveness of *Heracleum persicum* on Chloroquine-sensitive *Plasmodium berghei* in souri mouse using peters test

Nahideh Mazhari Zeinabad[1], Mehdi Nateghpour[1], Afsane Motevalli Haghi[1], Leila Farivar[4], Effat Souri[2], Peyman Heydarian[1]

1-Department of Medical Parasitology and Mycology, School of Public Health, Tehran university of Medical Sciences, Tehran, Iran

2-Department of Chemistry, Pharmacy Faculty, Tehran University of Medical Sciences, Tehran, Iran

* Corresponding author: Nahideh Mazhari Zeinabad

Department of Medical Parasitology and Mycology, School of Public Health, Tehran university of Medical Sciences, Tehran, Iran

Email: saba.mazhari@gmail.com

Abstract

Background: Malaria as a parasitic disease is one of the important public health problem in the world. The disease is more common in tropical and subtropical countries. It killed an estimated 584000 people in 2013, most of whom were children under 5 years of age in Africa. In Iran, Sistan and Baluchestan, Hormozgan are endemic area and in the last two decades, northern border areas with the neighboring republics of Armenia and Azerbaijan have always been a focus of vivax malaria. Global climate change, increasing parasite resistance to antimalarial medicines (sulfonamides, prymtamyn, mefloquine and chloroquine) and the emergence of insecticide-resistant mosquitoes lead to an increased risk of the disease. Natural products derived from medicinal plants provide an extensive source of new drugs and are the basis for the development of new pharmaceutical compounds. *Heracleum persicum*, commonly known as Golpar or Persian Hogweed grows wild in wetlands, riverbanks and humid mountainous regions in Iran. Given to the healing properties of this plant and its application in traditional medicine, this study was conducted to evaluate anti-malarial activity of this plant against chloroquine – sensitive strain of *P. berghei*

Material method: Fresh samples of *H. persicum* fruit were prepared and the ethanolic extracts of the fruits of the plant were prepared according to the standard method described by Sofowora. *Plasmodium Bergei NICD* strain injected into mice intraperitoanally were treated with different concentration of *Heracleum persicum*.

Result: ED50 for *Heracleum persicum* was 1500 mg/kg and its inhibitory effect was 63- 74%. Concentration of 1000 mg/kg reported as the most effective one, had 74% inhibitory function against *Plasmodium bergei* parasite.Two weeks daily administration of *H.persicum* had no toxic effect on the time.

Conclusion: *Heracleum persicum* can be used in the future, instead of or in combination with chemical antiparasitic drugs.

Keywords: *Heracleum persicum*, *Plasmodium Bergei*, Chloroquine-sensitive

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-036

Holothuria leucospilota extract induces apoptosis in *Leishmania major* promastigotes

Mojtaba Moghateli[1], Jasem Saki[2], Masoud Foroutan-Rad[2], Shahram Khademvatan[3]

1-Department of Medical Parasitology and Mycology, School of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

2-Department of Medical Parasitology, School of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

3-Department of Medical Parasitology and Mycology and Cellular and Molecular Research Center, Urmia University of Medical Sciences, Urmia, Iran

* Corresponding author: Mojtaba Moghateli

Department of Medical Parasitology and Mycology, School of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

Email: mojtaba.moghateli@gmail.com

Abstract

Background: *Leishmania* genus is a flagellate protozoan that causes leishmaniasis in about 100 countries worldwide. Current drugs that used for treatment of leishmaniasis have some limitations. Accordingly researchers are looking for safer and more effective drugs constantly. Marine organisms are claimed as good source of medicinal substances; thus, present study was aimed to evaluate antileishmanial activity of methanolic *Holothuria leucospilota* extract in *Leishmania major* promastigotes in vitro.

Material method: Promastigotes were cultured in RPMI 1640 medium and after reaching to stationary phase underwent study with different concentration of extract. Then MTT colorimetric assay for obtaining of 50% inhibitory concentration (IC50) was used. Also in order to determination of possible induction of apoptosis in *L. major* promastigotes, flow cytometry and DNA fragmentation methods were employed using annexin-V FLUOS staining kit and DNA ladder kit, respectively

Result: The IC50 value of H. leucospilota extract at three time points of 24, 48 and 72 h was estimated 2000, 300 and 85 µg/ml, respectively. Also the extract revealed a dose and time-dependent antileishmanial activity. Furthermore some characteristics of apoptosis were seen after treatment including: cell shrinkage, formation of apoptotic bodies, blebbing of cell membrane and externalization of phospholipid phosphatidylserine, but no laddering pattern were seen.

Conclusion: Our study revealed methanolic extract of *H. leucospilota* possess lethal effect on *L. major* promastigotes and also lead to induce the apoptosis in parasites, but mechanism of apoptosis induction in promastigotes by this extract is still unclear; therefore, further studies are required to address the apoptosis mechanism in vivo.

Keywords: *Leishmania major*, sea cucumber, *Holothuria leucospilota*, apoptosis, MTT, flow cytomtry, DNA fragmentation

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-037

Identification of *Leishmania* parasites isolated from patients with treatment failure leishmaniasis

Reza Arjmand[1], Sedigheh Saberi[2], Simindokht Soleimanifard[2], Seyed Hossein Hejazi[2]

1-Department of Parasitology, School of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

2-Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

* Corresponding author: Reza Arjmand

Department of Parasitology, School of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Email: arjmand.reza@yahoo.com

Abstract

Background: Leishmaniasis is a term that refers to a disease with a wide spectrum of symptoms. The disease is caused by the protozoan parasite *Leishmania* genus and can cause high morbidity and mortality. Cutaneous leishmaniasis (CL) in old world is usually caused by *L. major*, *L. tropica*, and *L. aethiopica* complexes. Due to the increase in reported cases of treatment failure, evaluating various aspects of this phenomenon is essential and one of the first steps in this way is the identification of parasite species.

Material method: In this study, during 2013, 10 patients suspected of cutaneous leishmaniasis who were referred to Isfahan health centers were selected. After completing the epidemiology form for each of the patients and confirming positive by direct microscopy after Giemsa staining, species characterization of ten isolates of parasites from patients with failure treatment after receiving at least one course of complete treatment with meglumine antimoniate was done using Nested- PCR method.

Result: After Nested-PCR from all 10 cases, 560 bp bands were produced which according to products of reference strains indicated that the infection etiologic agent had been *L. major*.

Conclusion: The results of this study showed that 10 strains isolated from patients with treatment failure by Meglumine antimoniate are *L. major*. Due to the increasing rate of treatment failure in Iran, necessity of further investigation on drug resistance of *L. major* to meglumine antimoniate is necessary.

Keywords: *Leishmania*, meglumine antimoniate, drug resistance, Nested-PCR

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-038

The Comparison of two methods the macroscopic and microscopic to determine of *sarcocystis* in goats slaughtered in Hamadan

Fatemeh parandin[1]

1-Department of Parasitology and Mycology, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah , Iran

* Corresponding author: Fatemeh parandin[1]

Department of Parasitology and Mycology, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran

Email: f.parandin@yahoo.com

Abstract

Background: Genus of *sarcosytis* have been recognized from130 heteroxenous species with different life cycle and pathogenesis.the infection is caused with eating of released Oocyst in the feces, by intermediate host. That can cause important economic loss and health issues in human and animals. The aim of this study was compare of two methods of microscopic and macroscopic to determine S*arcocystis* infection in slaughtered goat in Hamadan.

Material method: In this study a total of 360 goats' carcasses were examined using naked eye inspection for macroscopic sarcocysts, and digestion method, for microscopic types of parasite. Muscles from thigh, heart, tongue, esophagus, diaphragm and costal muscles were examined. All carcasses examined by naked eyes and tissues were minced and poured in digestion medium separately and sediment was examined microscopically.

Result: The sarcocysts were found in the 16.67% of esophagus and 13.34% of diaphragm by macroscopic carcasses. The prevalence of microscopic *Sarcocystis* in goat was detected in 100% organs and the highest rates of infection were seen in esophagus.

Conclusion: The results showed that the digestion is found the most sensitive method for diagnosis of *Sarcocystis*. Although 100% of muscles were found infected but the majority of the cysts in goat were as microcysts. That means, the meat should be cooked sufficiently irrespective of meat inspection results.

Keywords: *Sarcocystis* goat, digestion with pepsin, Hamadan

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-039

Effect of hydroalcoholic extract of *Artemisia dracunculus* on standard strains of *Leishmania major* proliferation in peripheral blood mononuclear cells and on IFN-γ and IL-4 production

Khosrow Hazrati Tappeh[1], Reza Rezaie [1], Shahram seyedi [2], Peyman Mikaeli[3]

1-Department of Parasitology and Mycology, School of Medicine, Urmia University of Medical Sciences, Urmia, Iran

2-Department of Immunology, School of Medicine, Urmia University of Medical Sciences, Urmia, Iran

3-Department of Pharmacology, School of Medicine, Urmia University of Medical Sciences, Urmia, Iran

* Corresponding author: Khosrow Hazrati Tappeh

Department of Parasitology and Mycology, School of Medicine, Urmia University of Medical Sciences, Urmia, Iran

Email: hazrati_tappeh@yahoo.co.nz

Abstract

Background: Leishmaniasis is a complex of parasitic disease, which is characterized as a wide range of clinical manifestations including coetaneous leishmaniasis, mucosal and visceral lesions. The herbal extracts and the ingredients of native plant sources have been recently processed by modern pharmaceutical methodologies and considered as rich biological sources for treating several infections in human being. Recently, so many innovations occurred in therapy of leishmaniasis. The aim of this study is evaluation of the effect of hydroalcoholic extract of *Artemisia dracunculus* on standard strains of *Leishmania major* proliferation in peripheral blood mononuclear cells and on IFN-γ and IL-4 production.

Material method: The standard strains of *Leishmania major* was added into a mixture containing 10% heat-inactivated fetal bovine serum (HFBS), 100 µg of streptomycin/mL, and 100 U of penicillin/mL, with passage each 3 or 4 days, in temperature 24±2°C. Peripheral blood mononuclear cells from human specimens were collected, plated at 106/mL in 24-well Lab-Tek, and incubated 4 h at 37°C, in CO2. Non-adherent cells were removed, and stationary-phase *L. major* promastigotes were added at a 4:1 parasite/PBMC ratio. The effect of several concentrations of *Artemisia dracunculus* extract, compared with Glucantime (pentavalent antimony compounds of Meglumine antimoniata), on promastigotes and amastigotes of *Leishmania major*, using Trypan blue and Giemsa vital staining of alive cells. The Inhibitory concentration in fifty percent (IC50%) was calculated and compared within groups with or without extracts. Additionally, the cytokines of IFN-γ and IL-4 were analyzed and compared within groups with or without extracts. All tests were performed in duplicate.

Result: The results of direct promastigote counting in the first day (after 24 h) and in the second day (48 h) indicated no significant differences between the extract and glucantime groups, ($p>0.05$) and ($p>0.05$), respectively. After passing more time, in the third day (72 h), the concentrations of 5, 10, 20, 25 mg/mL of the extract showed their activity, and the results were significant compared with glucantime and concentrations of 10 mg/mL , 20 mg/mL, 25 mg/mL, as ($p<0.01$), ($p<0.001$), and ($p<0.0001$), respectively. The results of cytokines IFN-γ and IL-4 showed significant differences in doses of 20 and 25 mg/mL of Optical Density (OD) readings ($p<0.0001$). As the extract concentration increases the IFN-γ and IL-4 gradually, showed increase and decrease, respectively.

Conclusion: As the different concentrations of the Artemisia dracunculus extracts have showed reasonable therapeutic activity on promastigotes and amastigotes of *Leishmania major*. The positive effects of this extract also include improving immunological responses. Regarding the results, we propose conducting more detailed and molecular investigations on the mechanism of action of *Artemisia dracunculus* ingredients on the *Leishmania major*, especially by nanotechnological models in animal and volunteer human subjects

Keywords: *Artemisia dracunculus*, *Leishmania major*, Glucantime, in vitro studies, in vivo

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-040

Evaluation of IL-27 gene expression to *Leishmania major* isolated from patients who have no responded to Glucantime

Sedigheh Saberi [1], Reza Arjmand[2], Simindokht Soleimanifard[1], Seyed Hossein Hejazi[3], Ali Khamesipour[4]

1-Department of Parasitology and Mycology,School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

2-Department of Medical Parasitology, School of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

3-Skin Disease and Leishmaniasis Research Center, Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

4-Center for Research and Training in Skin Diseases and Leprosy, Tehran University of Medical Sciences, Tehran, Iran

* Corresponding author: Sedigheh Saberi

Department of Parasitology and Mycology,School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

Email: sedisaberi@yahoo.com

Abstract

Background: Leishmaniasis is an endemic public health problem in some areas. IL-27 is produced by activated macrophages and DC and its function is to create a bridge between innate and adaptive immunity and it seems to play a role in the differentiation of Th1 and eventually overcome and effective recovery of leishmaniasis. The main objective of the study is evaluating the immune response and mentioned interleukin against patient's isolates who have no appropriate response to standard medicine, Glucantime, at the clinic compared with the standard species *(MRHO/IR/75/ER)*.

Material method: Experimental study was performed in 2014. After isolation of *Leishmania* from lesion patients who had at least one course of treatment failure with Glucantime in clinic, an in vitro and in vivo immune response and increasing the interleukin 27 gene expressions in both untreated and treated Glucantime groups were evaluated. Murine macrophage cell line *J774* for the in vitro, and Blab/c mouse for in vivo was used. Gene expression measured Using Real time PCR method. The results were analysed using covariance method.

Result: *L.major* was isolated from 10 lesion patients using nested-PCR. Mean gene expression of IL-27 in vitro also 2 and 3 weeks in vivo stages of Glucantime group treatment showed significantly increasing compared to untreated group in both isolated and standard species.

Conclusion: In this study the interaction between patient's isolates with no response to Glucantime and immune system in a specific host was evaluated. Based on the results it can be discussed that due to the boost effect of the Glucantime even in clinical resistance isolated, so not well respond to medication in these patients may be due to other causes, such as lack of appropriate drug delivery to target tissues and cells or drug resistance which can be used in other projects.

Keywords: IL-27 ،Glucantime ،gene expression ،clinical resistant ،*L. major*.

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-041

Disseminated Strongyloidiasis in an Iranian Immunocompromised Patient, case report

Narges Najafi[1], Eissa Soleymani[2], Shahabeddin Sarvi[3], Amirkeyvan Marofi[1], Anahita Nosrati[4]

1-Antimicrobial Resistance Research Center, Mazandaran University of Medical Sciences, Sari, Iran

2-Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

3-Toxoplasmosis Research Center, Mazandaran University of Medical Sciences, Sari, Iran

4-Department of Pathology Research Center, Mazandaran University of Medical Sciences, Sari, Iran

* Corresponding author: Eissa Soleymani

Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

Email: eissa_soleymani@yahoo.com

Abstract

Background: *Strongyloides stercoralis* is a soil-transmitted helminth (STH) widespread in various part of the world. Recently, it has been estimated about 370 million persons are infected with this parasite. Strongyloides is one of the most ignored infections between the neglected tropical diseases (NTDs). Data about *S.stercoralis* is very less than other major soil-transmitted helminths (STHs), such as *Ascaris lumbricoides*, *Necator americanus*, *Ancylostoma duodenale* and *Trichuris trichiura*. It can also replicate inside the host as an autoinfection and causing a long-lived infection in humans for decade. Infection with the *S.stercoralis* in persons with a complete immune system is self-limited but in Immunocompromised patients can be complicate and cause hyperinfection. The sign of strongyloidiasis is variable and contains asymptom, complaints such as irritation, inflammation, and pruritus at the place of penetration of the skin, Luffer's syndrome (larvae immigration through the lung), abdominal pain, qualm, diarrhea, and mal absorption syndrome with long-lasting strongyloidiasis. Presence of infection with S.stercoralis in the stomach and lung is relatively rare.

Material method: A 78-year-old peasant diabetic female from Mazandaran Province, Northern Iran was admitted to infection department of the Razi hospital in Qaemshahr city in north of Iran with complaint of abdominal skin rash, pruritus, itching, anorexia, nausea, vomiting, dysuria and cough.

Result: This patient has cutaneous migration effects of *S.stercoralis* larvae in her abdominal skin (larva currents and urticaria). Lung CT without contrast demonstrates bilateral diffuse ground glass opacity is noted. Upper gastrointestinal endoscopy revealed gastro esophageal reflux with antral gastritis. Duodenal endoscopy show unusual mucosa and a biopsy from it send to the pathology laboratory. Histopathology of duodenal bulb and duodenum biopsy showed mild villous atrophy and Strongyloides stercoralis infection. The patient was treated with Albendazole and clinical sings improved completely after treatment.

Conclusion: Strongyloidiasis should be carefully considered by clinicians who practice in endemic areas but is easily neglected by both the patients and physicians. Clinicians must keep a high level of suspicion for patients from endemic area

Keywords: *Strongyloides stercoralis*, immunocompromise, North of Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-042

The spread dangerous centers of cutaneous leishmaniasis in Golestan Province in 2009 – 2011

Mojtaba Moghateli[1], Javad Namrudi[1], Vahid Ajamein[1], Azita Eshratkhah Mohammadnejad[1], Yasaman Alijani[1]

1-Department of Medical Parasitology and Mycology, Medical Faculty, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

* Corresponding author: Mojtaba Moghateli[1]

Department of Medical Parasitology and Mycology, Medical Faculty, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

Email: mojtaba.moghateli@gmail.com

Abstract

Background: Cutaneous leishmaniasis in Iran is a major health problem. The disease is in the form of small swelling. Likely ulcers several weeks to several months and sometimes a year or more improved recently increased the number of cases of cutaneous leishmaniasis has been reported in Golestan Province This study aimed to determine the trend dangerous of disease identify foci Golestan Province and environmental characterization of these high-risk areas have been implemented

Material method: In the quantitative part, the years 2009-2011 on a digital map of the city with large-scale 1/2000 were mapped Generalization of the results to map the surface of the base population in urban areas and each area was selected based on the Statistical Center's population was estima In the qualitative part based on the amount of calculated dangerous foci of the disease were identified, and then go and see the exact dangerous areas with a checklist of possible environmental factors, the environmental characteristics of these areas were recorded

Result: A total of 3395 cases were observed. The main focus is on the western half of 2574 (%75) belong to the West. The riskiest areas province of the center (% 63) Gonbad the riskiest regions of the province. Some focus such as Minoodasht, Bandar Gaz least noted involved cases.

Conclusion: The main focus of leishmaniasis in the western part of regions Gonbad, was Kalaleh and other centers focus especially east had the lowest incidence

Keywords: Cutaneous Leishmaniasis, Risk map. Geographic Information Systems

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-043

Frequency of cutaneous leishmaniasis in Khash and Chabahar Counties from 2008 to 2014

Vahid Ajamein[1], Javad Namrudi[1], Mojtaba Moghateli[1]

1-Department of Parasitology and Mycology, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

* Corresponding author: Vahid Ajamein[1]

Department of Parasitology and Mycology, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

Email: vahid.ajamein@gmail.com

Abstract

Background: Leishmaniasis in Iran is an important health problem. This disease in the form of small swelling (papule) has gradually enlarged form ulcer comes. Likely his ulcers several weeks to several months and sometimes a year or more, improving .Given the fact that epidemiological studies are effective in disease control and preventive measures. This study aimed to investigate the epidemiology of cutaneous leishmaniasis in the Counties of Khash and Chabahar pays in the last 7 years.

Material method: This cross-sectional study was conducted on patients with cutaneous leishmaniasis during the past 7 years in Khash and Chabahar health center. As for the procedure of the study, the registered demographic and epidemiological data of patients at Khash and Chabahar health centers and using the descriptive statistics and relevant charts were analyzed by the software SPSS 18.

Result: According to the results Of 828 patients, 461 males (55%) and 367 females (45%). Majority of the patients were in the age range of 9 months to 4, and a smaller number of patients were in the age range top 40 to 49. Most lesions on the face and organs, and the majority of patients had two ulcers. Patients Iranian and Afghan ethnicity Majority of the patients were from the Iranian ethnicity. From the total patients, 346 diseases (42%) with dry cutaneous leishmaniasis urban and 482 (58%) were wet cutaneous leishmaniasis. The highest numbers of cases with cutaneous leishmaniasis were reported in winter of 2008 and the lowest number of them was reported in autumn of 2010.

Conclusion: According to the study, the frequency of the disease in the Counties of Khash and Chabahar in the years 2008 to 2014 had a decreasing trend. This reduction, due to the promotion hygienic educational status and personal hygiene is the people.

Keywords: Cutaneous leishmaniasis, Khash, Chabahar, Epidemiology

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-044

Occurrence of Strongyloidiasis in a family of five members, Mazandaran Province, North of Iran

Eissa Soleymani[1], roya Qasemian[2], mohammadtaghi rahimi[3], Azadeh mizani[3]

1-Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

2-Antimicrobial Resistance Research Center, Mazandaran University of Medical Sciences, Sari, Iran

3-Department of Parasitology and Mycology, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

* Corresponding author: Eissa Soleymani

Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

Email: eissa_soleymani@yahoo.com

Abstract

Background: *Strongyloides stercoralis* is a human's intestinal nematode with worldwide distribution. This parasite is common in tropical and subtropical regions also nematode commonly occurs in human communities which suffer from the low level of health living environment that is in favor of the survival and transmission of the parasite.

Material method: A 24 year-old man with diarrhea was referred to Razi Hospital in Ghaemshahr, Mazandaran Province in North of Iran in 2009 years. She suffered from chronic and stable diarrhea.

Result: In peripheral blood smear hyper eosinophili were seen. In stool examination, several larvae were observed. The size and shape of the larvae identified as *S. stercoralis* based on identification keys. Her Father, mother, brother and sister did not have diarrhea. But after examination of all family, we found that all members of this family were infected with Strongyloidiasis. Therapy was followed by prescribed of ivermectin. Our cases were followed for 3 weeks and all family was cured successfully.

Conclusion: The current report highlights occurrence of Strongyloidiasis in North of Iran due to proper conditions for the parasite survival and transmission. In addition, examination of member of each infected patient is essential in endemic areas.

Keywords: Nematode, *Strongyloides stercoralis*, Mazandaran, diarrhea, ivermectin

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-045

Prevalence, fertility and viability rate of hydatid cyst in slaughtered animals in Hamadan abattoir, West Iran, 2015

Mohammad Matini[1], Malihe Roostayi[1], Mohammad Fallah[1], Amir Hossein Maghsood[1], Massoud Saidijam[2], Zarifeh Akbari[3]

1-Department of Medical Parasitology and Mycology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

2-Department of Molecular Medicine and Genetics, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

3-Student Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

* Corresponding author: Zarifeh Akbari[3]

Student Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

Email: zarifehakbari94@gmail.com

Abstract

Background: Cystic echinococcosis (CE) caused by the larval stage of a taeniid cestode, *Echinococcus granulosus*, is one of the most important cosmopolitan parasitic zoonoses. Because of economic losses and public health concerns of hydatidosis, investigation of epidemiological aspects of the infection is important in communities involved. In addition to livestock such as cattle, camels, sheep, goats, and buffaloes, hydatidosis can affect human. The endemic regions are in the Mediterranean basin, Western and Central Asia, China, North and East Africa, South America and Australia. Iran is one of the countries affected by echinococcosis thus; the study was conducted to determine prevalence and some epidemiological aspects of hydatid cyst in slaughtered animals in Hamadan abattoir, west of Iran, 2015.

Material method: A cross-sectional descriptive study was conducted from February 2014 to October 2015 in industrial abattoir in Hamadan, west of Iran to determine prevalence, fertility and viability rate of hydatid cyst in slaughtered animals. Six thousand three hundred carcasses were investigated to diagnose hydatid cyst including 5186 sheep, 614 goats and 500 cattle. Then, the collected cysts were subjected to fertility and viability survey by using parasitological methods. Fertility was determined by the examination of cyst fluid for the presence of protoscolices and viability of protoscolices was assessed by staining with 0.1% aqueous eosin solution

Result: Frequency rate of hydatidosis in 6300 carcasses of livestock was 4.20% including 3.86%, 0.98%, and 11.6% in sheep, goats and cattle, respectively. The cases of lung hydatid cyst were more common than the cases of liver hydatid cyst in sheep (2.02%), goats (0.65%), and cattle (6.0%). Co-infection of the liver and lungs was common in sheep. A significantly higher infection was detected in older and female animals than young and male animals. The highest prevalence rate of hydatid disease in cattle and sheep slaughtered was seen in spring and the lowest rate was seen in winter, whereas the highest rate of infection in goats were higher in summer, and the lowest rate was seen in winter and autumn. The percentage of fertility recovered from liver and lungs of sheep was 81% and 87% respectively, while the all cyst recovered from cattle and goats were found sterile. The viability of protoscolices of fertile cysts was 90% and 95% from liver and lungs, respectively.

Conclusion: Based on the finding in the study, CE poses significant economic and public health problems. Thus, appropriate control measures is essential to reduce the economic losses and health risks

Keywords: Cystic echinococcosis, *Echinococcus granolosus*, livestock, Hamadan

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-046

Seasonal variation and health care importance of zoonotic parasits at the Hamadan slaughterhouse, 2014

Fatemeh Parandin

1- Department of Parasitology, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah , Iran

* Corresponding author: Fatemeh Parandin

Department of Parasitology, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran

Email: f.parandin@yahoo.com

Abstract

Background: Zoonotic parasits disease is common between herbivores and canines and has worldwide distribution. These infections caused economic losses and loss of animal products and also human health risks. The aim of this study is the survey on seasonal changes and the prevalence of the infection in animals at the Hamadan slaughterhouse in the year 2014.

Material method: In this cross sectional-descriptive study organs in slaughterhouse of Hamadan were studied based on the presence of these parasites using macroscopic observation. Data were analyzed using descriptive statistics and and chi-square test.

Result: The prevalence of infection with *Fasciola*, *Dicrocoelium dendriticum*, hydatid cyst and *sarcocystis* was 3%, 4.7%, 7.3% and .85% respectively. The highest rate of infection with Fasciola was seen in cattle (10%) and the highest rate of infection with *Dicrocolium* was seen in sheep (6.92%). Infection rates were greater in older animals than young animals (P< 0.001).As well as the rate of infection in females were more than males (P< 0.001). There was a significant relationship between the rate of infection and season (P< 0.001)). The maximum amount of infection was seen in spring (11.2%) and the lowest in winter (0.42/1%).

Conclusion: The present study showd that the prevalence of infection with hepatic trematods, hydatidosis and *Sarcocyctis* in Hamadan were is relatively high. So, for reducing the health risks and economic losses caused by liver trematods, hydatidosis and *Sarcocyctis* it is necessary to take appropriate measures for prevention and control of these infections.

Keywords: animals, *Dicrocoelium*, *Fasciola*, hydatidosis, *Sarcocyctis*

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-047

A Comparison of Leishmaniasis laboratorial diagnosis methods in diagnostic centers in Larestan

Mohammadreza Foroutani[1]

1-Shiraz University of Medical Sciences, Shiraz, Iran

* Corresponding author: Mohammadreza Foroutani

Shiraz University of Medical Sciences, Shiraz, Iran

Email: larres@sums.ac.ir

Abstract

Background: Leishmaniasis is one of the most important parasitic-skin disease in different of the world including in Iran. This disease, yearly, impose too much physical injury and financial damage on inhabitants of the region. Leishmaniasis is considered as a Endemic disease in South of Iran and Larestan, but; this disease has reached 549 cases in 2005 from 67 cases in 2003. The increase of sensitive and un-immune person is considered as a factor of the outbreak. But the other point is the change of laboratorial diagnosis method of this disease in medical-hygienic centers of the city. The object of this research is analysing the effect of this factor.

Material method: This is a qualitative study which has been done with the use of answer –sheets and oral survey at all of the diagnosis centeres (including 10 centers). In this study, the quality of the test and diagnosis personnel's knowledge has been considered.

Result: The results show; one of the most important diagnosis centers in the city, has changed the method of sampling. They have done sampling from the center of sore. Personnel's taking part in retraining periods of the diagnosis and the increase of the individual knowledge are the result of this research.

Conclusion: Although the increase in sensitive persons due to new births is an important factor in outbreak of cutaneous Leishmaniasis, but there are some other factors that will increase the statistic of this disease. Personnel's care while watching the cases and the increase in people's knowledge and efficiency has been probably effective to increase the diagnosed cases. In other words, the lack of correct laboratorial diagnosis of the disease can increase the amount of unknown ill persons, so this persons act as a source of disease in the region. Contagious disease in the region can be controlled by retraining personnel and the improvement of the diagnostic methods.

Keywords: Cutaneous Leishmaniasis, diagnostic laboratory, Iran.

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-048

Comparison diagnostic methods of feces tests to recognize intestinal parasites of children in South of Iran in 2005

Mohammadreza Foroutani

1-Shiraz University Medical Science, Shiraz, Iran

* Corresponding author: Mohammadreza Foroutani

Shiraz University of Medical Sciences, Shiraz, Iran

Email: larres@sums.ac.ir

Abstract

Background: The parasite diseases are one of the most important sanitation problems in underdeveloped areas. It is a considerable factor to prevent promotion of health and safety in societies, and it will be an effective help and contribution if we find a suitable method for their diagnostic tests. The purpose of this research is also to know, evaluate and choose the best method in terms of possibilities and the area's conditions.

Material method: We collected the samples of feces from several kindergartens in south of Iran and tested them by three methods; a: sedimentary (Formalin-Ether) b: direct method and c: Flocculoreaction, then the results were compared together.

Result: On the basis of the results achieved by this research, the amount of pollution with intestinal parasites, by using three methods, sedimentary, direct method, and flocculoreaction are 45.7%, 20.7%, and 14% respectively. Using disparametary statistics method and "Cochran Q Test", there are significant differences seen in using these methods,and it is mostly visible in recognizing the pathogenic parasites, so that diagnosing the pathogenic parasites by sedimentary(Formalin-Ether) method is (P<.003),compared with direct method ,and sedimentary method is (P<.001),compared with flocculoreaction method meaningful. The rate of pollution with pathogenic parasites has a remarkable relationship with the level of education of the family and the parents' occupations.(X2=19.38 df=4 P<.0005).

Conclusion: On the basis of this dissertation, the percentage of pollution with protozoan parasites is highly more than the pollution with worm-parasites, which results from the dry warm climate of this area, where the conditions are undesirable for the transmission and contagion of worm parasites. The type of pollution of this area is mostly protozoa, and it is necessary to use (Formalin-Ether) method, or at least direct method to diagnose. Using the flocculoreaction method, which is useful for diagnosis of worm parasites, is not suitable in this area.

Keywords: Diagnostic methods, intestinal parasites.

PP-049

Epidemiological position of leishmaniasis in South of Iran

Mohammadreza foroutani[1]

1-Shiraz University Medical Science, Shiraz, Iran

* Corresponding author: Mohammadreza Foroutani

Shiraz University of Medical Sciences, Shiraz, Iran

Email: larres@sums.ac.ir

Abstract

Background: Leishmaniasis is a native disease in larestan, and lots of people, yearly, are infected with this parasitic disease. There has been great change in its epidemiological situation through two decades ago. In the middle of 80s, the existence of the rural cutaneous leishmaniasis in the cities made the personnel of hygienic centers, concerned and surprised

Material method: The progress of the city to the suburbs, in the words, the construction of small town around the city, caused human to enter an environment where will rodents live. Most of these families were young couple who had newborn babies. An increase in unimmune people (as a result of new births) and the entrance of human to the center of rodents gathering caused of epidemic rural leishmaniasis in the city.

Result: The increase in the acceptance of university students in different fileds of study in the middle of 90s caused unimmune immigrants (university students) to enter the region. The hot weather in Larestan keeps them from wearing enough cloths at home or wherever they rest. During these years, seasonal rainfall (summer) made suitable places for sand flies to grow in this factor mixed with unimmune immigrants and created another epidemic. Hygienic process and development of hygiene training and treating contaminated person, to some extent, could control the disease.

Conclusion: The growing process of disease during a few years ago has been the result of new births, living in the suburbs, in another part of the city and finally the promotion of laboratorial diagnosis quality. These changes and improvements in diagnostic methods have had an effective role in this area. In fact, personnel's attention while observing of samples, development of personnel's knowledge, can cause increase of the disease statistics. Lack of correct diagnosis; caused, contaminated person act as a source of infection in the region. Retraining personnel and improving the diagnostic methods, can control the communicable diseases in region.

Keywords: Epidemiological, leishmaniasis, Iran

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-050

A Comparison of intestinal parasite abundance in people with and without clinical symptoms, coming to medical diagnosis laboratories in Shushtar, Iran, 2015

Shohreh aminpour[1], Abdollah Rafiei[1], Reza Arjmand[1]

1-Department of parasitology, School of Medicine, Ahvaz Jundishapur University of Medical sciences, Ahvaz, Iran

* Corresponding author: Shohreh aminpour[1]

Department of parasitology, School of Medicine, Ahvaz Jundishapur University of Medical sciences, Ahvaz, Iran

Email: aminpour.shohreh@gmail.com

Abstract

Background: Parasitic diseases are considered as threatening diseases for public health across the world. The diseases can carry no symptoms, but also in some cases they first weaken and then make their hosts ill by frequently harming their bodies. A vast wave of symptoms in these kind of diseases are seen in the form of runny diarrhea or mucoid, nausea and vomiting, dehydration, abdominal pains and fever, and sometimes resulting in the death of the diseased person, too. World Health Organization reports that approximately 3.5 billion people are infected with parasites across the world out of which 450 million have disease symptoms. In addition, more than 200,000 deaths caused by the parasitic infections happen every year. This happening is seen in tropical and semi-tropical areas where Iran belongs to the said areas. Khuzestan province, located in the south-west of the country having specific climatic and geographical conditions, is liable to the growth and reproduction of the parasites. In this study, we have decided to examine the parasitic disease abundance in people without disease symptoms and those with disease symptoms in order to increase the level of health and follow it up in the region

Material method: In this study, some questionnaires with sample test containers were first distributed randomly among people coming to the laboratories in Shushtar. Then, their sample test containers were sent to the laboratory of Health Department of Shushtar and after getting the sample tests classified, stool sample tests are performed firstly in direct method and then in formal-ether method on 200 sample tests of people without disease symptoms and 100 sample tests of people having disease symptoms. In the end, final analysis was done on the obtained data.

Result: The rate of parasitic infection in all people was 7/16 % which 2% of them were infected with more than one species of pathogenic or non-pathogenic parasites. 4.12% and 3.4% of parasites were related to people without disease symptoms and people with disease symptoms respectively. The highest rate of parasitic infection was revealed in non-pathogenic parasites, *Blastocystis hominis* 7% in both groups and, *Giardia* (a pathogenic parasite) in each group having disease symptoms and in the group without disease symptoms 5%. The highest rate of parasitic infection in people with disease symptoms was first reported as abdominal pain (67%) and then as diarrhea (22%) which intestinal parasite was observed in 53.8% of people having abdominal pain and in 22.7% of people affected by diarrhea. In both groups, positive cases in men were higher than in women.

Conclusion: The necessity to perform intermittent and periodic tests of all people in the society especially businessmen and craftsmen having the highest rate of pollution seem to be necessary which it may be different according to their jobs and lives. But with respect to the higher rate of pollution in people without symptoms, the necessity of the mentioned concern seems to be obvious. Moreover, health education of different classes of the society can be an effective step to increase the level of people's health.However; Health Department employees can play an important role in this regard.

Keywords: Intestinal parasite, clinical Symptoms, Shushtar

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-051

Study of intestinal parasites in primary school students of region-3, Shiraz city, Iran

Marzieh Ashrafmansouri[1], Ashrafmansouri Marzieh [1], Haghighi Ali[1], Hatam Gholamreza[2], Esmaili Mehrdad[3], Pourmasoudi Masoud[4]

1-Deptment of Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

2-Basic Sciences in Infectious Diseases Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

3-Fars Eduticaon organization, Iran

4-Diagnostic Laboratory Sciences and Technology Research Center, Shiraz University of Paramedical Sciences, Shiraz, Iran

* Corresponding author: Marzieh Ashrafmansouri

Deptment of Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Email: mansouri.marziehh@gmail.com

Abstract

Background: Pathogenic Intestinal parasites are causes gastrointestinal disease, with a relatively wide distribution in the world, including Iran. This study was conducted to determine frequency of intestinal parasites in primary school as well as to compare formalin-ethyl acetate and parasite test methods.

Material method: Stool samples were collected from 172 students. All of students were tested by Scotch's tapes method to detect Enterobius vermicularis ova. All of samples were also examined by using direct slide smear, formol-ethyl acetate concentration, modified Ziehl–Neelsen staining and parasite test methods.

Result: Out of 172 stool samples, the frequency of Intestinal parasites was 6.38 %. The frequency of intestinal parasites was: Three *Giardia lamblia 3* (1.74%), *Blastocystis hominis* 4(2.32%), *Endolimax nana* 2 (1.16%), *Iodomobea butschlii* 1 (0.58%) and *Entamoeba coli* 1(0.58%).

Conclusion: The frequency of Intestinal parasites was very low in the primary school children. Formalin-ethyl acetate was better than Parasite test for diagnosis of the above mentional positive protozoan parasites.

Keywords: Intestinal parasites, formalin- ethyl acetate method, parasite test

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-052

Human Hydatidosis/Echinococosis in North Eastern Iran from 2003-2012

Zohreh Andalib Aliabadi[1], Fariba Berenji[2], Abdolmajid Fata[3], Lida Jarahi[2]

1-Department of Parasitology and Mycology, Medical Faculty of Mashhad University of Medical Sciences, Mashhad, Iran

2-Department of Community Medicine, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

* Corresponding author: Zohreh Andalib Aliabadi

Department of Parasitology and Mycology, Medical Faculty of Mashhad University of Medical Sciences, Mashhad, Iran

‘**Email:** andalibzohreh@yahoo.com

Abstract

Background: Human cystic Echinococcosis (hydatidosis) continues to be an essential cause of morbidity and mortality in many parts of the world. We studied hydatid cyst pattern in hospitalized adult patients from 2003 to 2012 in Mashhad and Neyshabour, North east of Iran.

Material method: This study is a retrospective and descriptive study performed in hospitalized patients in Qaem and Emam Reza and 22 Bahman hospitals in Mashhad and Neyshabur, Iran from March 2003- Dec 2012. Data was collected by searching through patient's files in hospitals archives considering different factors such as age, sex, occupation, organ involvement and geographical distribution of patients. Statistical analysis was carried out by using the SPSS ver. 16 software and the results were compared with the similar studies done earlier

Result: In this study we evaluate 1342 patients who had hydatid cysts, 711 female (53%) and 631 male (47%) during ten years. Their age was between 1 and 91 years, (mean age 37.75). The most affected age group was 20-30 years old. The homemakers had the highest rate of infection. The distribution of residence in patient showed 953 cases (71%) of them having urban origin and 375 cases (27.8%) were rural residents. The liver was the most frequently infected organ followed by the lung, kidney, brain, spleen, diaphragm, heart, subcutaneous, Pancreas, ovary, spine, pelvic, Spinal cord, bladder

Conclusion: The rate of infection with hydatid cyst is high in Mashhad, and the incidence of human hydatidosis tends to increase in recent years so control and prevention programs are recommended. *Echinococcus granulosus* infected animals can act as reservoirs of human hydatidosis, finally treatment and vaccination of sheep and dogs are recommended and also personal hygiene must be noticed in order to prevent ingestion of infective eggs from soil contaminated with dog’s feces.

Keywords: Hydatid cyst, *Echinococcus granulosus*, Mashhad, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-053

The effect of splenectomy on nitric oxide induction and its role in the pathogenesis of rodent malaria caused by *Plasmodium berghei* infection

Sara Soleimani[1], Hossein Nahrevanian[2]

1-Department of Parasitology, School of Medicine, Kashan University of Medical Sciences, Kashan, Iran

2-Department of Parasitology, Pasteur Institute of Iran, Tehran, Iran

* Corresponding author: Sara Soleimani[1]

Department of Parasitology, School of Medicine, Kashan University of Medical Sciences, Kashan, Iran

Email: soleimanisarah@yahoo.com

Abstract

Background: Malaria is one of the largest killers of children in the world today. The Spleen is a major organ in the immune response against pathogens and host blood diseases and the organs involved in the fight against malaria. Splenectomy increases the sensitivity and severity of malaria as a results, it can be very dangerous and even lead to death. Nitric oxide (NO) is one of the key molecules produced in cells during malaria infection as a signal to destroy pathogens and induces cell death. This study determined whether the production of nitric oxide in the cells of the spleen may indirectly affect the malaria in animal model or not. It seems that the possible production of nitric oxide in the macrophages of the spleen may be happened indirect in malaria caused by *Plasmodium berghei*. Also in present study, the role of splenectomy on parasitemia, mortality patterns and weight of the mice and liver and spleen weight during malaria infection explained.

Material method: Female outbred *NMRI* mice 4 to 6 weeks old used in the study. The mice are divided into four groups, which two groups were infected with *P. berghei* parasite and the other two groups were remained uninfected and also we removed spleen from one uninfected group and one infected group. Every other day counting of red blood cells infected with parasites of *P. berghei* were done via thin blood smear stained with Giemsa. Animals survival rate were determined all during 16 experimental days. Finally, mice were euthanized by terminal anesthesia and cardiac puncture and the entire liver and spleen were removed for hepatosplenomegaly and Plasma and liver/ spleen suspensions were assessed by Griess Micro Assay (GMA) for immunobiochemical alterations including NO levels.

Result: Results of this study showed splenectomy decreased the mortality pattern but wasen't significant. We also observed that splenectomy increases the amount of parasitemia (P=0.0002). NO in plasma (P=0.0003), liver (P=0.2245) and spleen (P=0.3545) in groups were changed, but with a statistically significant difference was observed only in the plasma NO in infected groups (P=0.0003). Splenomegaly and hepatomegaly and body weigt weren't significant. This result supports the importance of the spleen as an essential site for the immune induction against malaria and its antimalarial immunity, as observed by others.

Conclusion: As a result, removal of the spleen decreased immune function against malaria but does not completely block the activity of the parasite by the immune system. The results of this study showed that NO in addition to spleen, NO may be producted such as liver and the body cells during malaria infection. In summary, parasite causes production of nitric oxide, but some parasite resistance mechanisms against the host immune system, leading to the break down molecules of nitric oxide and excreted from the host body to various metabolites. More investigations are required on different Plasmodia and animal hosts to clarify details of the splenectomy effect on the production of nitric oxide and its role in Immunoparasitology Malaria.

Keywords: Malaria, nitric oxide, splenectomy, *Plasmodium berghei*, mice

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-054

Study of Triclabendazole (Egaten®; Antehelminth drug) effect on Alanine Transaminase (ALT) activity of *Fasciola hepatica* and ALTs activity assay in parasite and liver

Ali Farahnak[1], Fariba Amni[1], Taghi. Golmohammadi [2], Mohammad Reza Eshraghian[3], Mohammad Bagher Molaei Rad[1]

1-Department of Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

2-Department of Biochemistry, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran

3-Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

* Corresponding author: Fariba Amni

Department of Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

Email: hiva.hamidi63@yahoo.com

Abstract

Background: Triclabendazole (TCBZ) is a choice drug for fascioliasis. In the present work, TCBZ (Egaten®) effect on Alanine aminoteransferase (ALT) enzyme activity of *Fasciola hepatica* parasite (Iranian isolates) is discussed. To compare enzyme activity of parasite and its host liver tissue, the enzyme levels of tissues and parasite were detected

Material method: The sheep livers were collected from local abattoir and living *F. hepatica* parasites were isolated. The washed parasites were cultivated in PBS media, pH 7.4 with or without Egaten®, 15µg/ml, for 4- 6 hours in an incubator at 37°C. Homogenized Extractions of collected parasites and liver tissue samples were prepared by in a mortar and pestle. After centrifugation, extraction samples were examined for protein measurement, ALT enzyme activity assay and proteins identification.

Result: The results of ALT enzyme assay showed 0.03 U/ml/mg protein activities for treated Fasciola hepatica and 0.01U/ml/mg protein for untreated samples, however, mean values difference is not significant ($P>0.05$). Two-sample T-test analysis showed higher ALP activity in parasite compared to healthy livers ($P<0.05$). Statistical analysis showed, the difference between ALT activity of healthy liver and infected liver are not significant ($P>0.05$). In addition to observing ALT protein band for parasite and liver tissue, Cathepsin enzyme protein (proteases) detected for parasite by SDS-PAGE analysis.

Conclusion: ALT enzyme has a comparable activity in parasite and host tissue. However, ALT activity could not be concerned as a marker for TCBZ efficiency on parasite.

Keywords: Alanine aminotransferase, *Fasciola hepatica*, Egaten®, Triclabendazole, liver

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-055

Unusual status of disseminated cutaneous leishmaniasis in Mazandaran Province

Eissa Soleymani[1], Mahdi fakhar[2], Hosein Pazoki Ghohe[1]

1-Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

2-Molecular and Cell Biology Research Center, Mazandaran University of Medical Sciences, Sari, Iran

* Corresponding author: Eissa Soleymani

Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

Email: eissa_soleymani@yahoo.com

Abstract

Background: Cutaneous leishmaniasis is an endemic disease in the tropics and neotropics. It is endemic in more than 70 countries international and estimated incidence of 1–1.5 million cases of cutaneous leishmaniasis (CL). It can be caused by a number of *Leishmania spp.* and is transferred to human beings and animals by sandflies, Phlebotomus and Lutzomyia species. Various clinical forms such as cutaneous, mucocutaneous and visceral depend on the infecting Leishmania species.

Material method: A 48 years old addict male was admitted to infection department of the Razi hospital in Qaemshahr town in north of Iran who recently had returned travel to Khorassan province in northeast, one of endemic area of Iran. He has complained of large lesions in his hand and his two feet that pained and molting of them. Extraction of Pus and smelly liquids of lesions had happened. He says that had traveled about three years ago to northeast that is one of endemic area of Iran and was bitten by flies 16 months ago. The pain was relieved after consummation of opium.

Result: In laboratory prepared thick smear of lesions and detected amastogote body detected. This patient referred to the protozoaological laboratory of Mazandaran University of Medical Sciences, for parasitological examinations such thick smear of lesions and culture in NNN culture medium and RPMI-1640 culture medium. In thick smear crenate amastigote body observed and in culture medium promastigote was growthing. Also we used of molecular method for identify genus of *leishmania*. PCR method indicates that this genus is *Leishmania tropica*. This patient was treatment by glucantime ampoule and discharge from hospital.

Conclusion: The gold standard in cutaneous leishmaniasis diagnosis is parasitological diagnosis, because of its high specificity. It contains microscopic examination with Giemsa-stained biopsy smears or aspirates, culture of biopsy triturates or aspirates, or histopathological test of fixed lesion biopsies. However, this method couldn't show species of CL. One of the best parasitological diagnoses for cutaneous leishmaniasis is molecular method. It is fundamentally done by PCR methods and is mostly useful in cases with low parasite load .Addicted to drugs is probably due to the expansion of ulcer in our patient, because he was used opium for pain reliever. We find *Leishmania tropica* in addicted peoples we use species-specific primers in our case and it shows our patient was stung by a sand-fly infected with *Leishmania tropica* can produce extensive and atypical ulcers and treatment by glucantime was successful, therefore recommended in similar cases use glucantime for treatment.

Keywords: Cutaneous leishmaniasis, PCR, *Leishmania tropica*

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-056

Cerebral toxoplasmosis in a HIV infected patient in Northern Iran

Eissa Soleymani[1], Farhang Babamahmoodi [2], Amirkeyvan Marofi[2], Leila Delavarian[2], Peyman Noshirvanpour[3]

1-Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

2-Antimicrobial Resistance Research Center, Mazandaran University of Medical Sciences, Sari, Iran

3-Depaetment of Tamin Ejtemaei, Valiasr Hospital, Qaemshahr, Iran

* Corresponding author: Eissa Soleymani

Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran

Email: eissa_soleymani@yahoo.com

Abstract

Background: Toxoplasmosis is caused by a ubiquitous protozoan parasite *Toxoplasma gondii.* This parasite is an obligate intracellular parasite which is widespread in most areas of the world. Globally, near a third of the world's people is chronically infected by *Toxoplasma gondii*. The occurrence of toxoplasmosis in Iran is among 50 to 75 percentages. The maximum infection level has been reported from Northern Iran with temperate and moist conditions while in Southern Provinces with dry and warm climates, this rate reduces considerably. Also the chief infection way of toxoplasmosis in Iran is via soil and water since in Iranian nutritional habits raw or undercooked meat is not consumed. The clinical appearances of this disease are depended on the immune status of the patient. It is usually a self-limited, asymptomatic disease in immunocompetent patients, while infection can reactivate at a later time if the patient becomes immunosuppressed. Transmission to persons happens chiefly by ingestion of undercooked meat that consist tissue cysts or whit exposure to Oocysts either through eating of contaminated vegetables or direct contact with cat faces. Other ways of transmission are organ transplantation and blood product transfusion. Cerebral toxoplasmosis is the most common opportunistic infection causing encephalitis or focal central nervous system (CNS) infection in Acquired Immune Deficiency Syndrome (AIDS) occurring in almost 3% to 40% of patients. We present a case of cerebellar toxoplasmosis in North of Iran who was HIV infected patient.

Material method: A 40 year old addict female patient from Mazandaran Province, Northern Iran was admitted to infection section of the Razi Hospital in Qaemshahr town in November 2015 with complaint of headache, blurring of vision and dysarthria of one month duration. Three weeks ago, she was surgery in other hospital by diagnosis of abscess brain. Blood examination indicates that she is HIV positive with normal CD4 count.

Result: Biopsy of brain was performed and was send to pathology. Cerebellar toxoplasmosis diagnosed because small tissue cyst with numerous of free bradyzoite was observed. She treated successfully and discharged of our hospital.

Conclusion: Clinically, patients with cerebral toxoplasmosis usually have a sub-acute presentation over numerous weeks with symptoms usually limited to the CNS including headaches, fever, confusion, focal signs, behavioral abnormalities and seizures.

Keywords: *Toxoplasma gondii*, immunocompetent patients, cerebral toxoplasmosis

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-057

Molecular identification of *Taenia hydatigena* using by ND1 gene in Isfahan Province

Alireza Borjian[1], Mohsen Arbabi[2], Mahdi Delavari[2]

1-Department of Laboratory Science, Faculty of Para medicine, Kashan University of Medical Sciences, Kashan, Iran

2-Department of Medical Parasitology, Faculty of Medicine, Kashan University of Medical Sciences, Kashan, Iran

* Corresponding author: Alireza Borjian

Department of Laboratory Science, Faculty of Para medicine, Kashan University of Medical Sciences, Kashan, Iran

Email: borjianalireza@yahoo.com

Abstract

Background: *Taenia hydatigena* is one of the most common cestodes of the gastrointestinal in the wild and domestic carnivores as dog in Iran and all over the world. The importance of this parasite is due to in currence economic losses and veterinary and damaging to the liver of the intermediate hosts such as sheep, goats and cows. Regarding to the high population of stray dogs in the environs of the domestic's keeping place and their role in the transfer of parasitic infections such *taenia hydatigena*, this study was conducted in Iran in order to determine the molecular characterization of collected parasites from stray dogs in Isfahan region during 2014-2015.

Material method: This cross-sectional study has been done in 30 collected stray dogs from Isfahan. After necropsy and complete opening of intestines, *Taenia hydatigena* was isolated and rinsed with saline. Morphological characteristics of scolexes and proglottids were used to confirm *Taenia hydatigena* species. Then parasite's scolexes were isolated and rinsed with sterile PBS for three times and were saved for 10 days at -70° C. In continuously by using a kit (DNA - Extraction / Cinnagen) DNA was extracted and PCR (Polymerase Chain Reaction) was performed by using specific primers. The PCR products were electrophoresed inagarose gel besides 100bp DNA marker and observed bands were analyzed by usinga UV transilluminator.

Result: Molecular analysis of *Taenia hydatigena* ND1 marker showed approximately the 506 bp fragment in gel electrophoresis of all isolates.

Conclusion: Mitochondrial gene (ND1) is a useful molecular tool to identify *Taenia hydatigena*. It is recommended more studies on these parasite genotypes.

Keywords: *Taenia hydatigena*, molecular identification, Isfahan,PCR, ND1

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-058

Cloning and Sequencing Analysis of Recombinant *Toxoplasma gondii* GRA5 protein

Zahra Arab Mazar[1], Seyyed Javad Seyyed Tabaei[2], Shirzad Fallahi[3], Ameneh Koochaki[4]

1-Infectious Diseases and Tropical Medicine Research Center, Shahid Beheshti Unversity of Medical Sciences, Tehran, Iran

2-Department of Parasitology and Mycology, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

3-Department of Parasitology and Mycology, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, Iran

4-Department of Biotechnology, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author: Zahra Arab Mazar

Infectious Diseases and Tropical Medicine Research Center, Shahid Beheshti Unversity of Medical Sciences, Tehran, Iran

Email: z.arabmazar@gmail.com

Abstract

Background: *Toxoplasma gondii* is an obligatory parasite which causes severe diseases in pregnant women and immunocopmromised patients so precise diagnosis in these patients has critical importance. Serological tests based on recombinant protein are one of the main diagnosis methods for detection of antibody in serum samples. GRA5 antigen is 11 KD proteins which released from host cells. Infected cell to tachyzoites 29 KD protein accumulates in parasitophorous vacuoles. Dense granule antigen proteins derived from *Toxoplasma gondii* (TgGRAs) are potential antigens for the development of diagnostic tools.

Material method: In the present study, DNA was extracted from *T.gondii (RH-strain)* tachyzoites and PCR reaction was done using corresponding primers. The PCR product was purified and ligated to *pTG19-t* vector and then suncloned into XhoI and BamHI digested pGEX6p-1 expression vector. Recombinant plasmid was transformed in *E.coli (BL21 DE3)* and induced by 1mM IPTG and analyzed by 15% SDS-PAGE. Expressed protein was confirmed by western blot analysis.

Result: There was no difference among the sequences of T. gondii GRA5 gene from different Isolates. The recombinant plasmid pGEX-6p-1/GRA5 induced by IPTG was expressed in *E.coli*. It was a GST fusion protein and could react with human positive sera analyzed by Western blot.

Conclusion: The GRA5 gene of T. gondii isolates is highly conservative. The GRA5 is expressed as a recombinant protein in *Escherichia coli*, which shows immunoreactivity.

Keywords: *Toxoplasma gondii*, dense granule antigen, GRA5, Cloning

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-059

In vitro activity of ethanolic extracts of *Medicago sativa* and *Satureja hortensis* against *Trichomonas vaginalis*

Farzaneh Mirzaei[1], Aref Teimouri[2], Bahman Rahimi Esboei[2], Ghazal Borhan[4]

1-Faculty of Para-Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

2-Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

3-Isfahan University of Medical Sciences, Isfahan, Iran

* Corresponding author: Aref Teimouri

Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

Email: Aref_teimouri@yahoo.com

Abstract

Background: Nowadays, Research with plants and their components are increasing for the discovery of therapeutic agents. *Trichomonas vaginalis* is a flagellated protozoa that associate with vaginitis, cervicitis, urethritis, pelvic inflammatory and other vaginal disorder. Current study is aimed to evaluate the anti-*Trichomonas* activity of *Medicago sativa* and *Satureja hortensis*, in vitro.

Material method: Ethanolic extract of plants were obtained by rotary evaporator and stored at -20°C for further use. The organisms used in this study were isolated from vaginal discharge of female patients. The efficacy of *Medicago sativa* and *Satureja hortensis* in concentration of 50, 100, 200, 400, 600, 800 and 1000 µg/ml was evaluate after 24, 48 and 72 hours.

Result: Approximately all extracts was suitable activity against *T. vaginalis*. Completely inhibition of growth (100% GI) was seen in concentrations of 1000 µg/ml after 48 hours of *Medicago sativa* and *Satureja hortensis*.

Conclusion: According to the results, it could be concluded that ethanolic extracts of *Satureja hortensis* and *Medicago sativa* are potent inhibitors of the growth of *T.vaginalis*. Additional works are recommended for isolation of active fractions and components.

Keywords: *Satureja hortensis*, *Medicago sativa*, *Trichomonas vaginalis*, in vitro

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-060

A survey on prevalence of intestinal parasites among patients referred to Imam Ali polyclinic of Shahr-e-kord in 2015

Koroush Manouchehri Naeini[1], Farnaz Marali[1], Soleiman Kheiri[2]

1-Department of Parasitology, Mycology and Entomology, School of Medicine, Shahr-e-kord University of Medical Sciences, Shahr-e-Kord, Iran

2-Deptment of Epidemiology and Biostatistics, School of Health, Shahr-e-kord University of Medical Sciences, Shahr-e-Kord,Iran

* Corresponding author: Farnaz Marali[1]

Department. of Parasitology, Mycology and Entomology, School of Medicine, Shahr-e-kord University of Medical Sciences, Shahr-e-kord, Iran

Email: farnazmarali@yahoo.com

Abstract

Background: Parasitic infections caused by intestinal parasites are among the most prevalent infections in humans all over the world, particularly in developing countries. Intestinal parasites cause a significant morbidity and mortality in endemic areas. The present study was carried out to determine the prevalence of intestinal parasites in patients from Shahr-e-kord in 2015.

Material method: The cross-sectional study that was a part of a project was carried out on 864 patients referred to Imam Ali poly clinic of Shahr-e-kord for their recent illness or periodic check- ups. The subjects were selected based on a non-randomly simple sampling method. The stool samples were prepared as wet mount preparations (with normal saline and Lugol's solution) and formalin-ether sediments. The preparations were examined microscopically for protozoan trophozoites/ cysts or ova/ larvae of helminthes. The socio-demographic characteristics of the subjects were also collected through questionnaires. The data were analyzed by the SPSS ver. 20 software.

Result: Out of the total samples, 495(57.3%) and 369(42.7%) samples belonged to females and males, respectively. The age of individuals was between 1 to 82 years (mean: 29.6±20). Of these population 746 individuals (86.3%) lived in urban, and 118 (13.7%) in rural areas. The study showed that of 864 examined stool samples, in 67 samples (7.8%) only protozoan parasites, whether pathogenic or non-pathogenic were found. The detected protozoan parasites were as follows: *Blastocystis hominis* (6.4%), *Giardia lamblia* (1.9%), *Entamoeba coli* (0.2%), *Endolimax nana* (0.2%), *Iodamoeba butschlii* (0.1%) and *Chilomastix mesnili* (0.7%). The Fisher's exact test showed that there was a significant relationship between the prevalence of the parasites and the location of living, so that the prevalence of the intestinal parasites in rural residents was higher than urban residents (13.6% vs. 6.3%) (P=0.011).

Conclusion: The present study showed that the prevalence of intestinal parasites, particularly helminthes, has been declined significantly during recent years in this region. However, the comparison of the prevalence rates between rural and urban areas indicates that the lack of health facilities, particularly safe drinking water in rural areas may be an important source of this infection.

Keywords: Intestinal parasites, prevalence, protozoa

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-061

Anti-parasitic activity and cytotoxicity of *Oak* extract in vivo

Farnaz Kheirandish[1], Marzieh Rashidi[2]

1-Lorestan unuversity of medical sciences, Khorramabad, Iran

2-Environmental Health Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran

* Corresponding author: Farnaz Kheirandish

Lorestan unuversity of medical sciences, Khorramabad, Iran

Email: kheirandish81@yahoo.com

Abstract

Background: Currently, there is no effective vaccine available, and chemotherapy is the main approach for treatment of cutaneous leishmaniasis. During recent decades, studies have demonstrated that a number of plant-derived compounds may act as new therapeutic tools against leishmaniasis. The aim of this study was to evaluate the antileishmanial, antioxidant, and cytotoxic activities of Quercus infectoria *Olivier (Oak)* extract.

Material method: The total amount of phenolic and flavonoid compounds was measured in *Oak* extract. High performance liquid chromatography analysis was also performed to detemine the amount of quercetin and gallic acid in the *Oak* extract. *Oak* was tested on cutaneous leishmaniasis in male BALB/c mice with *L. major* to reproduce the antileishmanial activity topically. Moreover, cytotoxicity effects of Oak in murine macrophage cells were tested by MTT assay. Antioxidative activity of Oak was also determined by the DPPH scavenging test.

Result: The amount of phenolic and flavonoid compounds in the *Oak* extract was 57.50 and 1.86%, respectively. The amount of quercetin and gallic acid in the *Oak* extract were 0.0064 and 0.22%, respectively. In the in vivo assay, after 4 weeks of treatment, 91.6, 66.66, 50% recovery was observed in the infected mice treated with 20, 10, and 5 mg/kg of *Oak* extract. After treatment of the infected mice with the concentration of 10 and 20 mg/kg of *Oak*, the mean diameter of lesions, parasite load and mean number of parasites was significantly reduced. Selectivity index of greater than 10 for *Oak* revealed that *Oak* extract had no cytotoxic effects on macrophage cells. Moreover, DPPH test demonstrated that radical inhibition occurred at greater power with increasing the concentration of *Oak*.

Conclusion: To conclude, the present study showed potent antileishmanial and antioxidant activity of *Oak* extract; whereas this plant had no toxic effect on mammalian cells.

Keywords: *Oak*, Cutaneous leishmaniasis, *Leishmania major*, mice

هشتمین کنگره بین المللی
آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-062

Diagnosis of snails infected with larval stages of zoonotic trematode worms

Gholamreza Motamedi[1], Mohammad Eslampanah[1], Gholamreza Karimi[1], Habiballah Paykari[1], Vahid Nasiri[1], Shahla Rivaz[1]

1-Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

* Corresponding author: Gholamreza Motamedi

Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Email: peregra85@yahoo.com

Abstract

Background: The *Lymnaea* snails transmitted trematods are bred and maintained in the laboratory for several purposes. They are most often used to support the life cycles of *Fasciola* spp., *schistosomes* and other trematodes, and to generate a supply of trematodes larvae. They are also used in the laboratory as intermediate hosts. The objective of this study was to diagnosis of snails intermediate host affected with larval stages of different trematodes

Material method: Snails were collected from canals in 2 provinces of Iran from spring to summer 2014. They were transported to the laboratory in water containers and maintained in small aquaria, supplemented with natural food (lettuce). Then snails were screened randomly for their infection by cercarial shedding method.

Result: 450 pulmonate snails of different species mainly three genera: *Lymnaea peregra* and *palustris* and *Physa spp*., were screened for cercarial infection. They were exposed to normal lights. The unforked tail cercaria was commonly observed in the infected snails. The infection rate of *L.peregra* and *L.palustris* were 61.5% and 19% respectively. Physa acuta did not show any infection with trematode cercaria. Cercarias while shedding were transferred to Petri dish. After the metacercaria were produced, they were kept in the refrigerator for further study.

Conclusion: The present study revealed that *L.peregra* and *L. palustris* are common snails found around location that were investigated and these snails act as intermediate host having infective stages of tramatodes. This kind studies aid researchers who have need or desire to maintain the life cycle of this pulmonate and its trematode parasites in the laboratory.

Keywords: *Lymnaea*, snail, Trematode, intermediate host

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-063

Evaluation of single nucleotide polymorphisms of multi drug resistance 1 (pvmdr1) gene, for *Plasmodium vivax* chloroquine resistance in hyperendemic foci of South-eastern Iran

Fattaneh Montazeri[1], Fatemeh Ghaffarifar [1], Abdolhosein Dalimi [1], Abbas Shahbazi[2], Ahmad Raeisi[3], Seyyed Ali Shariatzadeh [4]

1-Department of Parasitology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

2-Tabriz Research Centre of Infectious and Tropical Diseases, Tabriz University of Medical Sciences, Tabriz, Iran

3-Department of Medical Entomology and Vector Control Campaign, Tehran University of Medical Sciences, Tehran, Iran

4-Department of Parasitology and Mycology, Faculty of Medicine, Tabriz university of Medical Sciences, Tabriz, Iran

* Corresponding author: Fattaneh Montazeri[1]

Department of Parasitology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

Email: f.montazery@modares.ac.ir

Abstract

Background: A currently Multidrug-resistant strain of *Plasmodium vivax* has increased in endemic countries. However, the molecular mechanisms for resistance of *Plasmodium vivax* to chloroquine are unknown. The purpose of the study was to determine the prevalence of mutant pvmdr1 genes which are correlated with susceptibility of *Plasmodium vivax* to multiple antimalarial drugs.

Material method: Infected blood samples with *Plasmodium vivax* (n = 30) were collected during 2013–2015. The DNA were extracted from infected blood then pvmdr1 markers in all isolates were determined by using nested PCR and followed by sequencing the PCR product and finally comparison of the results with not mutant gene, in the Gene Bank.

Result: In this study eighty percent (80%) were males and twenty percent (20%) were females. In all samples (100%) single nucleotide polymorphism was observed at codon F1076L (phenylalanine to Leucine) and Y976F (Tyrosine to phenylalanine), however none of the isolates carried the mutation at codon 1106 (ACC to ACT, both coding for Threonine).

Conclusion: Although chloroquine is still an efficacious drug and the first-line treatment for *Plasmodium vivax* malaria in Iran. In this study the pvmdr1 mutation at codon F1076L and Y976F is reported for the first time in Iran. The pvmdr1 mutation could be an alarm for reduced susceptibility of the parasite to this drug.

Keywords: pvmdr1, *Plasmodium vivax*, chloroquine, drug resistance

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-064

Molecular identification of *Leishmania* Species isolated from Cutaneous Leishmaniasis by PCR-RFLP assay from Isfahan Province of Iran

Ghazal Borhan[1], Aref Teimouri[2], Homa Hajjaran[2], Bahman Rahimi Esboei[2]

1-Isfahan University of Medical Sciences, Isfahan, Iran

2-Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.

* Corresponding author: Ghazal Borhan

Isfahan University of Medical Sciences, Isfahan, Iran

Email: gh_b2003@yahoo.it

Abstract

Background: Leishmaniasis is a common disease caused by intracellular protozoan parasites belonging to the genus *Leishmania* and spread by certain species of sand fly. Cutaneous leishmaniasis (CL) is considered as an important health problem in many parts of Iran. *Leishmania tropica* and *Leishmania major* are two causing factors of cutaneous leishmaniasis. Current study aimed to obtain a better understanding of the status of different isolates of *leishmania sp.* in Isfahan Province of Iran.

Material method: In this descriptive, cross-sectional study, 74 isolates were included. After first growth in culture tubes, the parasites increased and were mass cultivated in RPMI 1640. DNA Was extracted from the culture medium RPMI 1640 then the PCR and RFLP assay were performed to identify the parasite isolates.

Result: In this study the leishmania isolates were collected from Isfahan Province of Iran. In this Province, both *L. tropica* and *L. major* were observed but the dominant isolate was *L. major*.

Conclusion: Both *L. tropica* and *L. major* are the causative agents of cutaneous leishmaniasis in Iran. Given the dominance of the *L. major* species in this province, further studies on reservoir and vector of ZCL are necessary in these area and other parts of Iran.

Keywords: cutaneous leishmania, *Leishmania tropica*, *Leishmania major*, Isfahan Province, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-065

Study of *Shilajit* extract on alkaline phosphatase level in experimental osteoarthritis in rats

Nafise Torabi[1], Nafiseh Torabi[2], Shahrzad Azizi [3], Reza Kheirandish[4], Omid Azari [5], Neda Eskandarzade[6]

1-Student of Veterinary Medicine, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran

2-Student of Veterinary Medicine, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran

3-Department of Pathobiology, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran

4-Department of Pathobiology, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran

5-Department of Clinical Sciences, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran

6-Department of Biochemistry, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran

* Corresponding author:

Abstract

Background: Osteoarthritis (OA) is the most common musculoskeletal disease, affecting millions of human in worldwide. OA develops progressively with joint failure including cartilage loss, synovial inflammation, subchondral bone sclerosis and cyst formation, osteophytosis, loss of range of motion, and pain. Different studies have been considered for achievement to a new drug with low side effects. In folk medicine, Shilajit is used in treatment of bone fractures and articular pain. Shilajit also is known as mumie, vegetable asphalt, mineral pitch, mimie, or mummiyo. The present study evaluated effects of Shilajit on MIA-induced OA via alkaline phosphatase (ALP).

Material method: MIA-induced OA rat model mimics pain, biochemical and structural changes associated with human OA. In the present study, 36 adult male rats were used and divided into osteoarthritis and Shilajit groups (water extract by gavage). For induction of osteoarthritis, rats were anesthetized. 3 mg of monosodium iodoacetate was dissolved in physiologic saline. A volume of 50 µl was injected unilaterally into right femorotibial articular space through the infrapatellar ligament. Contralateral knees were injected with an equivalent volume of saline. 24-48 hours after induction OA, the rats moved with a hypolocomotion and abnormal gaiting. The remarkable changes in the MIA induced joints of all rat were swelling. Blood samples of six rats were taken at 7, 14 and 21 days following the induction of OA. ALP levels were measured using a commercial kit.

Result: ALP activity was increased in blood serum after 7 and 14 days in both groups but Shilajit group showed higher level of ALP in compared with OA group. After 21 days, ALP enzyme was decreased in both groups although the level of ALP in rats receiving Shilajit extract was more than OA group.

Conclusion: These results showed the beneficial therapeutic properties of Shilajit on osteoarthritis. More studied are need for clarifying the mechanism of this natural substance and other unknown effects.

Keywords: Osteoarthritis, Shilajit, Alkaline phosphatase, Rat

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-066

Efficacy of *Sour Punica granatum* Aqueous Extract on Viability of *Echinococcus granulosus* Protoscolices, in Vitro

Zahra Jafari[1], Soheila Rouhani [1], Zahra Jafari1[1], Maryam Niyyati[1], Mohammad Kamalinejad[2], Farid Zayeri[3]

1-Deptment of Parasitology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

2-Deptment of Pharmacology, Faculty of Pharmaceutical, Shahid Beheshti University of Medical Sciences, Tehran, Iran

3-Deptment of Statistics, Paramedical faculty, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author: Zahra Jafari

Deptment of Parasitology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Email: irangenius@yahoo.com

Abstract

Background: Hydatidosis is one of the most important zoonotic diseases caused by *Echinococcus granulosus*. Humans are accidentally infected by ingestion of parasite eggs. Surgery is one of the best choices of treatment. Dissemination of protoscolex–rich fluid during surgery is a major cause of recurrence. Various scolicidal solutions have been used for surgical and percutaneous approaches. To date, no effective and safe agent has been identified. In this regard, WHO purposed an urgent need to find new and safe protoscolicidal agent. Many studies have shown that *Punica granatum* has antibacterial, antifungal and antiparasitical effects in vitro and in vivo.

Material method: Liver hydatid cysts were obtained from the slaughterhouse. Primary viability was assessed by eosin 0.1% dye test. Firstly, the most important acids and sugars in the sour *Punica granatum* aqueous extract were quantified using chromatography. Protoscolices were treated with 60, 70 and 80 mg/ml the extract (in 5, 10 and 15 minutes) with positive and negative control. One hundred protoscoleces were counted each time and the counting was repeated 4 times. For analyzing the data, two-way ANOVA and Tukey's test was used.

Result: A significant relation was observed between concentrations, exposure time and scolicidal activity. The protoscolicidal activity with an increase in concentration and exposure time was significantly raised. The most scolicidal effect was observed in 70 and 80 mg/ml aqueous extract after 15 minutes, which was as positive control. The least scolicidal effect was observed with 60 mg/ml concentration.

Conclusion: Although the scolicidal activity of *Punica granatum* aqueous extract in vitro study was satisfactory, its impact at in vivo and its probable side effects required more investigation.

Keywords: *Punica granatum*, *Echinococcus granulosus*, protoscolex

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-067

Scolicidal effect of citric acid on *Echinococcus granulosus* protoscolices, in vitro

Zahra Jafari[1], Soheila Rouhani [1], Maryam Niyyati1[1], Mohammad Kamalinejad[4], Farid Zayeri[5], Marzieh Ashraf Mansouri[1]

1-Department of Parasitology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

2-Department of Pharmacology, Faculty of Pharmaceutical, Shahid Beheshti University of Medical Sciences, Tehran, Iran

3-Department of Statistics, Paramedical faculty, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author: Zahra Jafari

Department of Parasitology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Email: irangenius@yahoo.com

Abstract

Background: Hydatidosis is one of the most important zoonotic diseases with widespread distribution. Surgery is one of the best choices for the treatment of hydatid cyst. Dissemination of protoscolex–rich fluid during surgery is a major cause of recurrence. Use of effective scolicidal agents during surgery for hydatid cyst is essential to prevent of secondary infection.

Material method: Liver and lungs hydatid cyst of sheeps were collected from slaughterhouse. Primary viability of protoscolex was assessed by vital staining (eosin 0.1 %). The citric acid ($C_8H_6O_7$) was diluted in normal saline. Protoscolices were treated with 80, 90 and 100 mg/ml concentrations in 5, 10 and 15 minutes. Normal saline and hypertonic saline were used as negative and positive control. One hundred protoscoleces were counted each time and the counting was repeated 4 times. For analyzing the data, two-way ANOVA and Tukey's test was used.

Result: Water soluble acid citric 90, 100 mg/ml concentration acted as positive control and we observed to lead to the death of 100% protoscolices after 15 minutes exposure. The least scolicidal effect was observed with 80 mg/ml (68.7%) concentration. Protoscolicidal activity was increased with enhancing the exposure time and acid citric concentration.

Conclusion: Although the scolicidal activity of water soluble acid citric concentrations in vitro experiment was satisfactory, its impact at in vivo and its probable side effects required more investigation.

Keywords: Citric acid, *Echinococcus granulosus*, hydatid cyst, protoscolex

اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
و
هشتمین کنگره بین المللی
آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-68

The effects of hydroalcoholic extracts of *Chenopodium album* on the growth of *Trichomonase vaginalis* in vitro

Sara Bafandeh[1], Zohreh Momeni[1], Hajar Ziaei Hezarjaribi[1]

* Corresponding author: Sara Bafandeh[1]

Email: sara.bafande@yahoo.com

Abstract

Background: Trichomoniasis is the most common sexually transmitted infection worldwide. The use of metronidazole is the first therapeutic choice, but trying to find an alternative drug because of side effects metronidazole is important. Therfore the aim of this study, the effect of hydroalcoholic extracts of *Chenopodium album* on the growth of *Trichomonase vaginalis* in vitro.

Material method: For this purpose, we obtained *T. vaginalis* from persons who were referred to Razi Diagnostic laboratory. Urine sediment of these patients was cultured in a TYM medium and was passaged for ten days. Then axenic cultures of parasites were used to study the effect of *Chenopodium album* extract. Different concentrations (37.5, 75, 150, 300, 600, 1200 µg/ml) of hydro alcoholic extracts of *Chenopodium album* leaves were tested in two different times (24and 48h) on *T. vaginalis* trophozoeites. In addition, the effect of metronidazole (50µg/ml) was investigated as the drug control. In all tests, the numbers of live and dead parasites were counted by trypan blue staining and Neubaur slide

Result: Result showed that the hydro alcoholic extracts of *Chenopodium album* had the inhibitory effects on the growth of trophozoeites of *T. vaginalis*. Hydro alcoholic extract (1200µg/ml) showed 91% and 100% growth inhibition (GI) during 24 and 48 hours, respectively.

Conclusion: These results indicated that extract of Chenopodium album is of favorable trichomonacidal activity and can be a candidate for trichomoniasis treatment.

Keywords: *Trichomonas vaginalis*, hydro alcoholic extract, *Chenopodium album*, in vitro.

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-069

The surveillance of intestinal parasitic infection prevalence among patients referred to urban and rural health centers of Urmia from 1388 to 1393

Azita Eshratkhah Mohammad nejad[1], Jafar Gholizadeh Salmasi[2], Mojtaba moghateli[1]

1-Department of Medical Parasitology and Mycology, School of Medicine, shahid Sadoughi University of Medical Sciences , Yazd , Iran

2-Department Microbiology and virology, School of Medicine, Pastor institute, Tehran Iran

* Corresponding author: Azita Eshratkhah Mohammad nejad

Department of Medical Parasitology and Mycology, School of Medicine, shahid Sadoughi University of Medical Sciences , Yazd , Iran

Email: azi4453@gmail.com

Abstract

Background: Intestinal parasitic infections as one of the most important economic and health problems, has involved millions of people in many parts of the world, especially developing countries. These infections are also of considerable importance and major health problems in Iran. Fortunately, improving health in urban and some rural areas has reduced infection rate significantly. Epidemiological survey and understanding the environmental and social factors associated with it are the most important ways to control and prevent these diseases. This retrospective cross-sectional study was conducted to evaluate the prevalence of parasitic infections in the last 5 years in the city of Urmia. (Center of West Azerbaijan Province)

Material method: The population studied was visitors to the laboratories of urban health centers in Urmia. Data were collected as census and by evaluating the test results obtained from visitors to laboratories. The samples were evaluated by routine parasitological methods, including direct test and if necessary Formalin- ether concentration method. Out of total 284471 visitors in the years 1388 to 1393, 3868 people were found that were infected by one of the 6 parasitic diseases.

Result: Out of total positive cases, 97.36% had protozoan infection and 2.63% had helminthic infection. Of this amount, *Giardia* infection (93.69%) was the most prevalent infection. The incidence of other parasitic infections among reported positive cases in order of frequency were: *Entamoeba histolytica* 3.2%, *Oxyuris* 1.47%, *Hymenolepis nana* 0.87%, *Trichomonas vaginalis* 0.46% and *Ascaris lumbricoides* 0.28%, respectively.

Conclusion: Parasitic infections are considered to be one of the most important determinants of health. Its variable at different times and societies suggests the requirement for periodic review of the prevalence of parasitic infections compared to past years. According to recorded reports of intestinal parasitic infections in urban health center laboratories (the city of Urmia), the necessity for the prevention of intestinal parasitic infections is health education, especially for Giardia infection with frequency of 3624 people.

Keywords: Intestinal parasites, Helminthic infections, Protozoan infections, Urmia, West Azerbaijan

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-070

Molecular identification of *Acanthamoeba spp.* in surface waters of Birjand, Eastern Iran

Mahmood reza Behravan[1], Ali Naghizadeh[2], Parisa Bonyabadi[3]

1-Department of Microbiology, Birjand University of Medical Sciences, Birjand, Iran

2-Department of Environmental Health Engineering, Birjand University of Medical Sciences, Birjand, Iran

3-Plant cell and Developmental Biology, Faculty of Biology Sciences, Kharazmi University, Tehran, Iran

* Corresponding author: Mahmood reza Behravan[1]

Department of Microbiology, Birjand University of Medical Sciences, Birjand, Iran

Email: mahmoodreza.behravan@yahoo.com

Abstract

Background: Free living amoebae (FLA) are amphizoic protozoa that are widely found in various environmental sources. They are known to cause serious human infections, including a fatal encephalitis, a blinding keratitis, and pneumonia. So, due to their medical importance, identification of free living amoeba in water resources is necessary. The objective of this study was to determine the presence of *Acanthamoeba spp.* from surface waters in Birjand city, Eastern Iran.

Material method: From October 2014 to January 2015, 50 samples were collected from numerous localities in Birjand city including surface waters, pools and fountains in parks and squares and water stations. Each sample was filtered through a nitrocellulose membrane filters and cultured on non-nutrient agar (NNA) with *Escherichia* coli suspension and incubated for 2 to 7 days at 30°C or 42°C. The plates were examined by microscopy to morphologically identify *Acanthamoeba* species. Following DNA extraction, PCR using specific primers was used to confirm the microscopically identification.

Result: Out of the total of 50 samples cultured on non-nutrient agar (NNA), 19 (38%) samples were morphologically polluted with *Acanthamoeba spp.* In addition, Acanthamoeba *spp.* was identified by PCR method in 15 (78.9%) cases of positive cultures showing a nearly 500bp band.

Conclusion: considering the prevalent of *Acanthamoeba spp.* in surface stagnant waters of Birjand, more attention to the potential role of such waters in transmission of infection by the regional clinicians and health practitioners is necessary.

Keywords: *Acanthamoeba spp.*, Water, Morphology, PCR, Birjand

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PB-175

Phylogenetic tree of *Ecoli* with *PKS strain* isolated from patients with Ulcerative Colitis in Iran

Bahar Azadi-Moghadam[1], Shirin Moradifard[2], Shahla Mohammad Ganji[2], Mohsen Zargar[1], Jean- Philippe Nougayrède [3]

1- Department of Microbiology. Islamic Azad University, Qom branch, Qom, Iran.

2- National Institute of Genetic Engineering and Biotechnology, Tehran, Iran.

3- Université de Toulouse; UPS, Centre de Physiopathologie de Toulouse Purpan (CPTP); Toulouse, France

* Corresponding author: Shahla Mohammad Ganji.

National Institute of Genetic Engineering and Biotechnology (NIGEB) Address: Shahrak-e Pajoohesh, km 15, Tehran - Karaj Highway, Tehran, Iran. E-mails: shahlamg@yahoo.com

Abstract

Background: Recently, the incidence of Ulcerative colitis (UC) has increased in developed countries. Several factors such as genetics, environmental and biological elements are effective in causing the disease. The studies showed that one of the most important involvement factors in UC, is bacteria infection, especially infected with the *E. coli* with polyketide synthase (PKS) strain. The aim of this research was isolation and characterization of *Ecoli* with *PKS strain* isolated from the biopsies of patients with UC in Iran as well as drawing Phylogenetic tree of these bacteria.

Material method: For this reason, we obtained 51 and 60 biopsies from patients with UC and normal subjects referred in Baghiatalah Hospital respectively. The bacteria of biopsies identified using biochemical experiments. Then the Duplex PCR was done for *PKS* genes on the genomic DNAs try to find the Ecoli with PKS strain. Try so the analysis of Phylogenetic tree for this strain was constructed by amplification and sequencing of the 16srRNA gene by Bioedit and Mega5 software.

Result: Phylogenetic tree constructed with the following main groups(*E.coli, Proteus* و *Enterococcus).BGN11* Bacteria were in the E.coli group and other that have a *PSK* gene were in this group again but the *BGN14, BGN15* bacteria were far from the other E.coli.

Conclusion: More than 34% of E.coli strains phylogenetically was belonged to B2 group that they carry a genomic protected area called PSK. It produces a colibactin that is a genotoxin, so led to Failure of the double-stranded DNA in intestinal epithelial cells. Consequently, increases the colon cancer.

Keywords: Ulcerative Colitis,Phylogenetic tree,*Ecoli,PKS*

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-71

Development of real-time PCR assay for detection of Toxoplasma gondii based in biological samples

Mahboobe berizi[1], Seyed Abdolhamid Angaji[2], Majid Golkar[3]

1- Department of Biology, Kharazmi University, Hesarak, Karaj, Iran

2- Department of Biology, Kharazmi University, Hesarak, Karaj, Iran

3- Molecular Parasitology Laboratory, Parasitology Department, Pasteur Institute of Iran, Tehran

* Corresponding author: Mahboobe Berizi

Department of Biology, Kharazmi University, Hesarak, Karaj, Iran. **Email:** berizi.mahboobe@gmail.com

Abstract

Background: PCR-based methods are extensively used for detection of Toxoplasma gondii in biological samples where very low number of the parasite is present. As such, Different PCR targets and PCR-based methods have been developed with varied sensitivity and specificity. We designed a real-time PCR assay targeting the 529 bp repetitive sequence of T. gondii and evaluated the sensitivity, specificity, limit of detection, limit of quantification and linearity of the test.

Material and methods: A pair of specific primer was designed using AlleleID program to amplify a portion of the 529 bp repetitive sequence of T. gondii. The amplified sequence was cloned in a plasmid and the recombinant plasmid was purified. Genomic DNA of Toxoplasma and the recombinant plasmid were used in different concentrations and copy numbers to measure sensitivity of SYBR green real-time PCR and find the linear portion of the standard curve. Limit of detection (LOD) was found as lowest amount of the recombinant plasmid giving a signal stronger than those of the negative control. Limit of quantification (LOQ) was found as lowest amount of the recombinant plasmid in the linear potion of the standard curve which permanently gives a signal stronger than those of the negative control. Specificity of the real-time PCR was evaluated using genomic DNA from leishmania major and Plasmodium falciparum.

Results: A SYBR green real-time PCR was developed amplifying a portion of the 529 bp repetitive sequence of T. gondii. The sensitivity (LOD) of the test was 70 fg, approximately one tachyzoite, of Toxoplasma DNA and 10 copy number of the recombinant plasmid containing the PCR target. The test was linear, R2=0/99, across 102 and 105 copy of the recombinant plasmid. Using the genomic DNA of Toxoplasma tachyzoite, the test was linear, R2=o/90, across 7 ng and 70 fg of the DNA. The signals from real-time PCR on genomic DNA of Leishmania major and Plasmodium falciparum was comparable to the negative control.

Conclusion: We developed a sensitive and specific SYBR green real-time PCR for detection of T. gondii in biological samples. The test was capable of detecting twenty copy number of RE sequence, approximately 0.1 tachyzoite per reaction. The test is also linear across wide range of parasite DNA concentration, making it suitable for parasite enumeration in clinical settings and experimental vaccination studies.

Keywords: quantitative competitive PCR , toxoplasma gondii ,real time PCR-RE

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-72

P-glycoprotein A Gene Expression in Glucantime-Resistant and Sensitive Leishmania major (MRHO/IR/75/ER)

Simindokht Soleimanifard [1], Reza Arjmand [2], Sedighe Saberi[3], SeyedHossein Hejazi[4]

1- Mycology and parasitology dept, faculty of medicine, isfahan university of medical sience

2- Department of Parasitology, School of Medicine, Ahvaz jundishapur university of medical sciences, Ahvaz, Iran,

3- Mycology and parasitology dept, faculty of medicine, isfahan university of medical sience

4- Skin Disease and Leishmaniasis Research Center, Department of Parasitology and Mycology, School of Medicine Isfahan University of Medical Sciences, Isfahan, Iran

* Corresponding author**:** Simindokht Soleimanifard

Mycology and parasitology dept, faculty of medicine, Isfahan University of medical sience.
Email:s_soleimanifard@yahoo.com

Abstract

Background: Leishmaniasis is a parasitic disease caused by different species of Leishmania parasites with a wide range of clinical manifestations. Antimonial com¬pounds such as meglumine antimoniate (glucantime) are the first line drugs for the treat¬ment of leishmaniasis. However, according to reports of the drug resistance of parasites, the efficacy of antimonial compounds is low. The ATP-binding cassette (ABC) proteins are present in all organisms and mediate the transport of vital elements through biological membranes. One of the important mechanisms of resistance in Leishma¬nia parasites is the overexpression of ABC efflux pumps. P-glycoprotein A (pgpA) is a related gene for ABC transporter in Leishmania species. The aim of this study was to compare the pgpA expression in laboratory-induced resistant L. major (MRHO/IR/75/ER) and sensitive parasites

Material and methods: To induce of resistance in cultured promastigotes, the parasites were plused by gradually increasing meglumine antimonite from 1mg/ml up to 120 mg/ml. 120 mg/ml was seen toxic for promastigotes. RNA extraction of promastigotes of sensitive and resistant clones was per¬formed and total RNA was reverse transcribed. The real-time quantitative polymerase chain reaction (PCR) was used to assess RNA expression profiles and the expression levels were calculated using 2-ΔCt method.

Results: The mean expression level of pgpA mRNA was 2.70 ± 0.51 in sensitive Leishmania clone and 6.08 ± 1.50 in resistant Leishmania clone (P = 0.021).

Conclusion: The expression of pgpA gene in resistant strains of L. major was almost fivefold higher than those in susceptible strains. Therefore, this can be used in field isolates, i.e. overexpression of the gene can prove resistance in wild type field isolates.

Keywords: PGPA, Leishmania major, glucantime, Real-time RT-PCR

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-73

Molecular Characterization of gene encoding Aquaglyceroporin1 from Leishmania major (MRHO/IR/75/ER)

Maryam Ghavami[1], Gilda Eslami[2], Alireza Moradi[3]

1- Department of Medical Parasitology and Mycology, Faculty of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

2- Department of Medical Parasitology and Mycology, Faculty of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

3- Department of Medicinal Chemistry, Faculty of Pharmacy, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

* Corresponding author**:** Maryam Ghavami

Department of Medical Parasitology and Mycology, Faculty of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran. **Email:** ghmaryam95@yahoo.com

Abstract

Background: Leishmaniasis, caused by Leishmania spp. is a protozoan parasitic disease that affects 12 million people worldwide. The first line choice for the treatment of this disease is antimonial drugs.One of the mechanisms for uptaking the antimonial drugs is a trans-membrane protein named aquaglyceroporin1. Mutation in this protein is one the mechanisms involving resistance to antimonials. In this study, molecular characterization of the gene encoding of aquaglyceroporin1 from L. major (MRHO/IR/75/ER) named LmAQP1 was assessed.

Material and methods: Culturing of L. major (MRHO/IR/75/ER) was done in NNN and then RPMI 1640. Then, DNA extraction was done with salting out method from cultured promastigotes. Extracted DNA was analyzes by spectrophotometer and agarose gel electrophoresis. The suitable primer pair was designed using Primer3 for whole LmAQP1 gene. After amplification of the mentioned gene and verification using agarose gel electrophoresis, the fragment was sequenced.

Results: Sequencing showed that there is a new mutation in the gene encoding aquaglyceroporin1 resulted in changing the amino acid of this protein.

Conclusion: Drug resistant parasites with various mutations in gene encoding aquaglyceroporin1 have been shown resistance to the antimonial drugs. Therefore, the new mutation in this protein from L. major (MRHO/IR/75/ER) may affect the uptaking of the drug.

Keywords: Leishmania major, antimonial, aquaglyceroporin

PP-74

The morphology of corynosoma capsicum (Acanthocephala, poly morphidae) from Gasterosteus aculeatus fishes, in the Caspian Sea using scanning electron microscopy (SEM)

Mahdi Najm[1], Mehdi Najm1[2], Mahdi Fakhar2[3]

1- Iran

2- Student Research Committee, Iran University of Medical Sciences

3- Molecular and Cell Biology Research Center, School of Medicine, Mazandaran University of Medical Sciences

* Corresponding author**:** Mahdi Najm

Iran. **Email:** mehdi.najm1@yahoo.com

Abstract

Background: Over 150 specimens of corynosoma capsicum parasites (Yamaguti, 1963) were collected from several Gasterosteus aculeatus fishes in the southern Caspian Sea in the Babolsar city from Mazandaran coastal by multi mesh gill nets in 2012. The aim of this study was subjected different forms of this worm parasites using scanning electron microscopy (SEM).

Material and methods: In this experimental study for microscopical examination, then of isolation specimen's worm parasites of all fishes were placed in water for 3-6 hr. Then these were fixed in the Ethanol 70.

Results: In this study, worms were showed consistent variations by using of light microscopy especially in proboscis hook and trunk spine patterns. Also, SEM images revealed many features that have not been previously reported including the shape and distribution of trunk spines, dorso ventral differences in proboscis hooks and their organization, the baldness of anterior proboseis, and epidermal micropore.

Conclusion: This isolated population of corynosoma capsicum from Caspian Sea ratio other acanthocephalan parasites is distinguished by the distribution of trunk spines, consistently size of trunk and proboscis hooks. Also obtain information of this worm parasites by SEM studies is reported for the first time in Iran

Keywords: Acanthocephala, corynosoma capsicum, SEM, Gasterosteus aculeatus.

PP-75

The role of helminth parasites as heavy metals pollution indicator in aquatic ecosystems

Mahdi Najm[1], Mehdi Najm1[2], Mahdi Fakhar2[3]

1- Iran

2- Student Research Committee, Iran University of Medical Sciences

3- Molecular and Cell Biology Research Center, School of Medicine, Mazandaran University of Medical Sciences

* Corresponding author**:** Mahdi Najm
Iran. **Email:** mehdi.najm1@yahoo.com

Abstract

Background: The heavy metals has described as a one of the most important problems in ecology and life of creates particularly human and animals. However in recent years, to assess metals pollution of aquatic ecosystem of different indicators such as fishes tissues, birds and sediments were used;hence, the aim of this study was a narrative review the published articles in Iran and world of the helminth parasites as a heavy metals bioindicator

Material and methods: The data were collected from available scientific databases including Google Scholar,Pubmed,Web of Science, Scopus and Scientific Information Database (SID).

Results: The most investigations in different regions of the world was showed that helminth parasites particularly (acanthocephalan and cestoda) could be used as a bioindicator for evaluation of concentration rate of heavy metals.

Conclusion: limited investigations were conducted of nematoda and trematoda parasites and limited information was available regarding heavy metal bioindicators in Iran. In conclusion the most investigations were showed that in aquatic ecosystems, including marine and aquatic organisms within them have been exposed to heavy metals pollution

Keywords: Helminth parasites, Achanthocephal, Bioindicator, Heavy metals

PP-76

Prevalence of Trichomoniasis by IFA assay in Guilan province

Roya Ramezanian Siahkalroudi[1], Ramezanian R[2], Valadkhani Z[3], Asmar[4]

1- Islamic Azad University of Lahijan

2- university of Lahijan

3- Institute

4- University of lahijan

* Corresponding author**:** Roya Ramezanian Siahkalroudi

Islamic Azad University of Lahijan. **Email:** roya.ramezanian@gmail.com

Abstract

Background: Trichomonas vaginalis is a parasitic protozoan that causing trichomoniasis, which is a sexually transmitted disease (STD), and a large number of the couples infect to this parasite per year. Due to side effects of this infection, such as preterm labor of infants from infected mother, infertility and increase risk of infection with AIDS, this STD is very important. New reports indicated that the prevalence of Trichomonas vaginalis is more than 180 million cases per year in the world. In fact, the world health organization estimated that this infection allocated almost half of curable sexually transmitted infections. Thus, the aim of this study was to estimate the prevalence of this infection by indirect immunofluorescence antibody (IFA) assay in Guilan province

Material and methods: The study was conducted on 120 women attending to Health centers in Guilan province from May to October 2015. Women's demographic information was collected through questionnaires. By using a sterile cytobrush, the cervical and posterior vaginal secretions were collected and used for direct smear and checked by light microscope. Blood samples also were collected from each patient in order to use for indirect immunofluorescence antibody test. For IFA test the slides were coated with Trichomonas vaginalis, and serum samples were checked for any anti Trichomonas vaginalis immunoglobuline.

Results: Among 120 under study patients, several suspected cases were observed according to the patient's complains. The results of the different methods indicated that, five samples showed IgG positive and two samples were positive for IgM antibody of Trichomonas vaginalis. Only one sample was positive by direct smear. Thus, the prevalence of this infection according to IFA test is about %5.8 in Guilan province in this period.

Conclusion: Due to the similarity of symptoms in STDs, it is recommended that gynecologist use the laboratory diagnostic methods alongside with observation of signs and symptoms in the patients. Although the gold standard method of diagnosis in this infection is culture media method, but it is expensive and time consuming. Thus using IFA and direct smear, that is cheap and easy to perform, is recommended. The correct diagnosis helps to early treatment and prevents side effects of inappropriate use of drugs that is a complicated problem in health centre of our country.

Keywords: Trichomonas Vaginalis, IFA

PP-77

Study the intestinal parasitic infection rate in Masjed Soleyman in 2013-2015

Komeil Mazhab jafari[1], Komeil Mazhab-jafari[2], razieh Bahrami[3], Fateme moghimi-zare[4], Maryam mohamad-pour[5], rozita mostatab[6], Maryam shomali zade[7]

1- Faculty member of Medical Laboratory Sciences Department. Abadan School of Medical Sciences, Abadan, Iran

2- Faculty member of Medical Laboratory Sciences Department. Abadan School of Medical Sciences, Abadan, Iran

3- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

4- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

5- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

6- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

7- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

* Corresponding author**:** Komeil Mazhab jafari
Faculty member of Medical Laboratory Sciences Department. Abadan School of Medical Sciences, Abadan, Iran.
Email: k.mjafari@yahoo.com

Abstract

Background: Intestinal parasitic infections are still a major health problem in semi-developing countries. The aim of this study is the frequency of intestinal parasites in Masjed Soleyman in 2013-2015.

Material and methods: Stool samples of 2990 individuals referred to a hospital in Masjed Soleyman were collected and examined macroscopically for any helminthes or proglottids and microscopically for any ova, larva, cyst or trophozoites. The results were analyzed by using SPSS version 19 and Chi-square test.

Results: From 2990 cases 18.8% were infected with intestinal parasites. 6.7% with Giardia lamblia, 4.6% Entamoeba histolytica/dispar, 3.3% Blastocystis hominis, 2.2% Entamoeba coli, 1% Endolimax nana, 0.6% Chilomastix Mesnili , 0.3% Hymonlepsis nana, 0.1% Iodamoeba butschelli, 0.1% Enrerobius Vermicnlaris. It was found maximum infection rate autumn, and minimum rate summer with intestinal parasites. The results show a significant relation between the prevalence of intestinal parasites and seasons of year ($P < 0.05$).

Conclusion: In spite of public health improvement and significant reduction of parasitic diseases, some of the parasites which transmit directly are still present in the society but compared to previous years have seen a considerable decrease.

Keywords: Intestinal Parasites, Epidemiology, Masjed Soleyman, Iran.

PP-78

Study the prevalence of giardiasis in Masjed Soleyman city in 2013-2015

Komeil Mazhab-jafari[1], razieh Bahrami[2], Fateme moghimi-zare[3], Maryam mohamad-pour[4], rozita mostatab[5], Maryam shomali zade[6]

1- Faculty member of Medical Laboratory Sciences Department. Abadan School of Medical Sciences, Abadan, Iran

2- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

3- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

4- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

5- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

6- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

* Corresponding author**:** Razieh Bahrami

Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran. **Email:** razihebahrami@gmail.com

Absract

Background: Giardiasis is a parasitic disease caused by Giardia lamblia and is prevalent in tropical and subtropical regions. The rate of infection in children is higher than adults and in acute phase can cause steatorrhea. The aim of the study was determination of giardiasis prevalence in Masjed Soleyman city in 2013-2015.

Methods: Stool samples of 2990 individuals referred to a hospital in Masjed Soleyman were collected and examined macroscopically for any helminthes or proglottids and microscopically for any ova, larva, cyst or trophozoites. The results were analyzed by using SPSS version 19 and Chi-square test.

Results: From 2990 cases 6.7% were infected with Giardia lamblia. The rate of Giardiasis between men and women show infection in men is more than women. It was found maximum infection rate summer, and minimum rate spring with Giardia lamblia. The results show a significant relation between the prevalence of intestinal parasites and seasons of year ($P < 0.05$).

Conclusion: In spite of public health improvement and significant reduction of parasitic diseases, some of the parasites which transmit directly are still present in the society but compared to previous years have seen a considerable decrease.

Keywords: Giardiasis, Epidemiology, Masjed Soleyman, Iran

هشتمین کنگره بین المللی
آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-79

Study the prevalence of Amoebiasis in Masjed Soleyman city in 2013-2015

Fateme Moghimi zare[1], Komeil Mazhab-jafari[2], Fateme moghimi-zare[3], razieh Bahrami[4], Maryam mohamad-pour[5], rozita mostatab[6], Maryam shomali zade[7]

1- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

2- Faculty member of Medical Laboratory Sciences Department. Abadan School of Medical Sciences, Abadan, Iran

3- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

4- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

5- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

6- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

7- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

* Corresponding author**:** Fateme Moghimi zare

Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran. **Email:** fatemehmoghimi.73@gmail.com

Abstract

Background: Amoebiasis is an infection caused by any of the amoebas of the Entamoeba group. Symptoms are most common upon infection by Entamoeba histolytica. Amoebiasis can present with no, mild, or severe symptoms. Symptoms may include abdominal pain, mild diarrhoea, bloody diarrhea or severe colitis with tissue death and perforation. This last complication may cause peritonitis. The aim of the study was determination of Amoebiasis prevalence in Masjed Soleyman city in 2013-2015.

Methods: Stool samples of 2990 individuals referred to a hospital in Masjed Soleyman were collected and examined macroscopically for any helminthes or proglottids and microscopically for any ova, larva, cyst or trophozoites. The results were analyzed by using SPSS version 19 and Chi-square test.

Results: From 2990 cases 6.8% were infected with Entamoeba histolytica/dispa and Entamoeba coli. The rate of Amoebic parasites in women is more than men but not significant relation between them. It was found maximum infection rate spring, and minimum rate summer. The results show a significant relation between the prevalence of Amoebiasis and seasons of year ($P < 0.05$).

Conclusion: In spite of public health improvement and significant reduction of parasitic diseases, some of the parasites which transmit directly are still present in the society but compared to previous years have seen a considerable decrease.

Keywords: Amoebiasis, Epidemiology, Masjed Soleyman, Iran

PP-80

Study the prevalence of Blastocystis in Masjed Soleyman city in 2013-2015

Maryam Mohammad pour[1], Komeil Mazhab-jafari[2], Maryam mohamad-pour[3], razieh Bahrami[4], Fateme moghimi-zare[5], rozita mostatab[6], Maryam shomali zade[7]

1- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

2- Faculty member of Medical Laboratory Sciences Department. Abadan School of Medical Sciences, Abadan, Iran

3- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

4- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

5- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

6- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

7- Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran

* Corresponding author**:** Maryam Mohammad pour

Medical Laboratory Sciences student. student research committee, Abadan School of Medical Sciences, Abadan, Iran. **Email:** Maryammohamadpoor@yahoo.com

Abstract

Background: Blastocystis hominis is a unicellular organism found commonly in the intestinal tract of humans and many other animals. Since this parasite is thought to be non-pathogenic many people do not care to it. The aim of the study was determination of Amoebiasis prevalence in Masjed Soleyman city in 2013-2015.

Material and methods: Stool samples of 2990 individuals referred to a hospital in Masjed Soleyman were collected and examined macroscopically for any helminthes or proglottids and microscopically for any ova, larva, cyst or trophozoites. The results were analyzed by using SPSS version 19 and Chi-square test.

Results: From 2990 cases 3.3% were infected with Blastocystis hominis. The rate of Blastocystis in men is more than women but not significant relation between them. It was found maximum infection rate spring, and minimum rate summer. The results show a significant relation between the prevalence of Blastocystis and seasons of year ($P < 0.05$).

Conclusion: In spite of public health improvement and significant reduction of parasitic diseases, some of the parasites which transmit directly are still present in the society but compared to previous years have seen a considerable decrease.

Keywords: Blastocystis, Epidemiology, Masjed Soleyman, Iran

PP-81

Seroprevalence of Toxoplasma gondii infection among patients admitted to Al-Zahra hospital, Isfahan, Iran

Mohsen Ghomashlooyan[1], Mohammad Ali Mohaghegh[2], Hajar Yazdani[3], Mahboobe Hadipour[4]

1- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

2- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

3- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

4- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

* Corresponding author**:** Mohsen Ghomashlooyan

Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran. **Email:** mgn1370@yahoo.com

Abstract

Background: Toxoplasma gondii infection is one of the most common parasitic infections among humans and other warm-blooded animals worldwide. The aim of this study was to evaluate toxoplasmosis status in patients admitted to Al-Zahra hospital, Isfahan, Iran.

Material and methods: This cross-sectional study was conducted from October 2012 to January 2015. During this period, 716 patients referred to Al-Zahra hospital in Isfahan city, Iran, were studied to investigate the IgG and IgM antibodies against

T. gondii using ELISA kit. The data were analyzed by Chi-square and Fisher's exact tests. In addition, the relation of data with age and sex were also examined.

Results: Among 716 patients, 21 patients (2.9%) had positive IgM and 288 patients (40.2%) had positive IgG titer against T. gondii. Data analysis by Chi-square and Fisher's exact tests revealed that there was no significant relationship between IgG titer and age ($P > 0.05$). Additionally, there was no relationship between IgM titer and age ($P > 0.05$). The data showed that there was no relationship between IgG and IgM antibody titer and sex ($P > 0.05$).

Conclusion: The prevalence of toxoplasmosis in Isfahan inhabitants seems fairly high but it can be concluded that the rate of seropositive patient is moderate comparing to other regions of country. Accordingly, the authors propose all sensitive patients have to be tested for T. gondii antibody in order to prevent the consequences of disease.

Keywords: Seroprevalence, Toxoplasma gondii, Isfahan, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-82

The Prevalence of Trichomonas vaginalis infection in women referred to the gynecology clinics in Qorveh city, 2015

Kharaman Golmoradi[1], Mohammad Matini[2], Kharaman Goglmoradi[3], Mohammad Fallah[4], Amir Hossein Maghsood[5]

1- Students research center,Hamadan University of Medical Science,Hamadan,Iran

2- Department of Medical Parasitology and Mycology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

3- Students Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

4- Department of Medical Parasitology and Mycology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

5- Department of Medical Parasitology and Mycology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

* Corresponding author**:** Kharaman Golmoradi

students research center,Hamadan University of Medical Science,Hamadan,Iran. **Email:** kharamangolmoradi@gmail.com

Abstract

Background: Trichomonas vaginalis infection is one of the most common sexually transmitted diseases worldwide that involved millions of individuals annually. Trichomonas vaginalis is a parasitic protozoan with a predilection for human urogenital tract and causative agent for vaginitis, cervicitis and urethritis in females. This study was conducted to determine the frequency of Trichomonas vaginalis infection in females referring to health centers in Qorveh city, west of Iran.

Material and methods: This descriptive cross-sectional study was conducted on 600 women who referred to Gynecologic clinics and health centers in Qorveh city from July 2015 to November 2015. To detect T. vaginalis parasite, two vaginal swab samples to be taken from participants. The first swab was examined by light microscopy at low (×100) and high (×400) powers and the second subjected to Dorset's culture. The culture medium was tested daily up to 7 days until they turned positive.

Results: Outcomes of two diagnostic methods demonstrated six infected individuals for T. vaginalis infection (1%). Although, two of infected patients (0/3%) were diagnosed by wet mount technique. The age range of the participants was 15 to 65 years. All of those infected, were married housewives and four of those were illiterate. The all women suffered from at least one of the signs and symptoms of trichomoniasis. Other signs and symptoms in this study that were reported included itching, dysuria, dyspareunia and inflammation of the genital tract.

Conclusion: According to the results frequency of trichomoniasis is considerable in the society and because of medically important complications of infection, there is a great need for effective comprehensive sexuality education programs in the community.

Keywords: Trichomonas vaginalis, Frequency, Qorveh

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-83

Epidemiological Study of Neglected Tropical Disease; Cutaneous Leishmaniasis, with Affiliation to Dasht-e Azadegan County During a Decade (2001 -2011).

Mohammad Hossein Feiz Haddad[1], Khatereh Safaei[2], Azadeh Saki[3], Rezvan Feiz Haddad[4]

1- Health Research Institute, Infectious and Tropical Diseases Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

2- Msc student of Medical parasitology, Department of Parasitology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

3- Department of biostatistics, School of Medicine, Mashhad University of Medical Sciences

4- Department of Nursing, School of Medicine, Dezful University of Medical Sciences, Dezful, Iran

* Corresponding author**:** Mohammad Hossein Feiz Haddad

Health Research Institute, Infectious and Tropical Diseases Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran. **Email:** hfeizhaddad@yahoo.com

Abstrat

Background: Background and purpose: Leishmaniasis is a parasitic disease with extensive clinical signs. It is a zoonotic disease, which is transmitted by phlebotomine sandflies and seen in cutaneous (cutaneous leishmaniasis), visceral (kala-azar) and mucocutaneous forms. It is in endemic form in different regions of Iran. The epidemiological data in Dasht-e Azadegan is inadequate and this study aimed to examine the prevalence process and epidemiological characteristics of cutaneous leishmaniasis during a decade (2001-2011). This study also intended to draw attention to the dramatic increase in new cases with CL in this area after the beginning of sectarian war in Iraq country and majority movement of Population between both side borders.

Material and methods: This is a cross-sectional epidemiological alstudy and examined 2637 patients with cutaneous leishmaniasis in Dasht-e Azadegan County during 2001-2011. The data of all patients who referred to the Prevention Unit of Dasht-e Azadegan Health Center were registered in cutaneous leishmaniasis epidemiological data summary forms. The data and parameters included age, gender, occupation, season, residence (urban, rural), and lesion location.

Results: Of 2637 patients with cutaneous leishmaniasis in Dasht-e Azadegan County, 1174 patients (44.5%) were females and 1463 patients (55.5%) were males. The maximum rate of infection recorded for under-10-year-old age group (45.3%) and its minimum rate was seen among those aged over 60 years (0.9%). Exclusively, 1557 patients (59%) were living in cities and 1080 (41%) in rural areas. The maximum and minimum occupational frequency distributions were documented in students (49.9%) and farmers (0.6%), respectively. The study showed that the maximum and minimum frequencies of the disease in the matter of season were in winter (52.33%) and summer (7.62%), correspondingly. The most lesion frequencies from lesion location point of view were related to hands (37.5%), face (30%), feet (26.3%), and other organs (6.3%).

Conclusion: The studied epidemiological parameters have had significant effects on prevalence of cutaneous leishmaniasis in Dasht-e Azadegan County. Furthermore, large Population movement in recent years to endemic regions particularly from neighboring country of Iraq may lead to large increases in case numbers into other side border of Iran; Dashte-Azadegan. In order to decrease the risk of exposure, housing conditions of the residents must be improved, effective measures must be set in place for vector control, routine health controls must be executed, effective procedures must be set in place for vector control, and infected individuals must be diagnosed and treated to prevent spread of the disease.

Keywords: cutaneous leishmaniasis, epidemiology, Dasht-e Azadegan County, Iran

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-84

FREQUENCY OF PARASITIC INFECTIONS IN PATIENTS REFERRED TO CENTRAL LABORATORY IN KHOSROSHAHR, EAST AZERBAIJAN PROVINCE, IRAN

Reza Berahmat[1], Berahmat Reza[2], Ghoyouchi Roghayeh[3], Mahami-Oskouei Mahmood[4], Parsaei Mehdi[5], Mikaeili Tahereh[6], Hassanzadeh Mehdi[7], kamran Azad Jafar[8]

1- MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

2- MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

3- MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

4- Assistant Professor, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

5- MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

6- MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

7- BSc, CENTRAL LABORATORY, KHOSROSHAHR, EAST AZERBAIJAN PROVINCE, IRAN

8- BSc, CENTRAL LABORATORY, KHOSROSHAHR, EAST AZERBAIJAN PROVINCE, IRAN

* Corresponding author**:** Reza Berahmat

MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran. **Email:** brahmat156@yahoo.com

Abstract

Background: Parasitic infections are the most important health problems in many developing communities, especially in IRAN. The rate of parasitic infections is an indicator of health in any society. Therefore in this study, the frequency of parasites in patients referred to the central laboratory of Khosroshahr was analyzed from 2014 to 2015.

Material and methods: This study was carried out on 6736 stool samples which were collected from patients who referred to the central laboratory of Khosroshahr. All of stool samples examined using both direct microscopy and formalin-ether methods. Scotch test as a best way to diagnose pinworm infection and urine sediment samples for determine Trichomonas vaginalis were used in the present investigation.

Results: Overall, 7.39% of collected samples were positive. Giardia lamblia and Entamoeba histolytica had the highest and the lowest frequency with 2/15% and 0/01% respectively. Frequency of different parasites was determined as follows: Blastocystis Hominis 1/52%, Endolimax nana 1/15%, Entamoeba coli 0/86%, Iodamoeba butschlii 0/44%, Trichomonas hominis 0/16%, Entamoeba histolytica/dispar 0/02%, pinworm eggs 6/61 % and Trichomonas vaginalis 0/41%.

Conclusion: According to the results, control and prevention of parasitic infections it seems necessary. In order to public awareness for health promotion, implementation of health interventions at the community level is inevitable.

Keywords: parasitic infections, intestinal protozoa, prevalence, Khosroshahr, IRAN

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-85

Prevalence of intestinal parasitic infections among patients refferd to Khalij Fars hospital in Bandar Abbas, Iran, 2015

Khojasteh Sharifi-sarasiabi[1], Farzaneh Dehghan[2], Nader Zolghadri[3]

1- Molecular Medicine Research Center, Hormozgan University of Medical Sciences,Bandar Abbas ,Iran.

2- M.Sc Microbiology, Hormozgan Social Security management, Khalij Fars Hospital of Social Security, Bandar Abbas, Iran.Molecular Medicine Research Center, Hormozgan University of Medical Sciences,Bandar Abbas ,Iran. .

3- Department of Mathematics, Islamic Azad University,Sama college,Bandar Abbas,Iran.

* Corresponding author**:** Farzaneh Dehghan

M.Sc Microbiology, Hormozgan Social Security management, Khalij Fars Hospital of Social Security, Bandar. **Email:** dehghanfarzaneh@ymail.com

Abstract

Background: The prevalence of intestinal parasitic infections in tropical and subtropical regions is more than other parts of the world. In this way, we decided to evaluate the prevalence of intestinal parasites in patients refferd to Khalij Fars hospital in Bandar Abbas due to its location in the subtropical region.

Material and methods: The stool samples were collected from in-patients and out-patients admitted to the hospital between July and December, 2015. All stool specimens were examined macroscopically, and microscopically by using the formalin-detergent and direct wet-mount technique. Then Statistical analysis of data was performed by SPSS 21.

Results: During the study period, 1064 samples were obtained. The overall prevalence of infection was 45 (4.2%).The frequency of the observed intestinal parasites were: Giardia lamblia17(1.6%), Entamoeba coli 8(0.75%), Endolimax nana 6(0.56%), Blastocystis hominis 5(0.47%),Trichomonas hominies 3 (0.28%),Strongyloides stercoralis larva 2 (0.19%),Entamoeba histolytica 1 (0.09%), ,Hymenolepis nana egg 1 (0.09%), Chilomastix mesnili 1 (0.09%), Enterobius vermicularis egg 1 (0.09%), respectively. All of the patients were infected with single intestinal parasite.

Conclusion : According to Bandar Abbas is located in subtropical regions, but the infection was not seen as much as expected perhaps due to improved sanitation and environmental health.

Keywords: Prevalence, intestinal parasites, Iran

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-86

Seroprevalence of Toxoplasma gondii infection in pregnant women referred to medical health laboratory in Ardabil province, Iran

Marziyeh Naseri[1], keramat Majid[2], Spotin Adel [3], Ahmadpour Ehsan [4], Ghoyouchi Roghayeh[5], Berahmat Reza[6], Mikaeili Tahereh[7], Mohammadzade Asad [8]

1-MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

2-MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

3-Assistant Professor, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

4-Assistant Professor, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

5-MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

6-MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

7-MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

8-MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran

* Corresponding author**:** Marziyeh Naseri

MSc. Students, Department of Parasitology, Faculty of Medicine,Tabriz University of Medical Sciences, Tabriz, Iran. **Email:** naserim88@yahoo.com

Abstract

Background: Toxoplasma gondii is an obligate intracellular apicomplexan parasite, causing congenital infections. This parasite usually causes asymptomatic infection but sometimes severe toxoplasmasis occur in both humans and mammals. The aim of this study was to evaluate the seroprevalence of T. gondii infection among pregnant women in Ardabil province, Iran.

Material and methods: In this cross-sectional study, serum samples were collected from 655 women referred to medical laboratory in Ardabil province, northwestern of Iran, during 2014 - 2015. Sera were tested for Anti- T. gondii IgG and IgM antibodies by Electrochemiluminescence method.

Results: The overall seroprevalence of anti-T. gondii IgG in pregnant women in Ardabil province was 35.3% (231/655), and 2.9% (19/655) of the positive samples were also seropositive for anti- T. gondii IgM.

Conclusion: T. gondii transmission to the fetus can result in serious health problems. Sero-negative women represent a high-risk group in pregnancy. Since, there is a significant percentage of Toxoplasma seronegativity among pregnant women in Ardabil (64.7%), it seems that health education and follow up the seronegative cases during the pregnancy is recommended.

Keywords: Toxoplasma gondii, pregnant women, Ardabil, Seroprevalence

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-87

Validation of a Sample Preparation Technique to Visualize the Leishmania parasite after lyophilization by fluorescence microscopy

Fatemeh Khalilinia[1], Khalilinia F[2], Doroud D[3], Taheri T[4], Rafati S[5]

1- Department of Biology, Damghan Branch, Islamic Azad University, Damghan, Iran

2- Department of Biology, Damghan Branch, Islamic Azad University, Damghan, Iran. and Department of the Quality, Production and Research Complex, Pasteur Institute of Iran, Karaj, Iran **Email:** khaliliniap@yahoo.com

3- Department of the Quality, Production and Research Complex, Pasteur Institute of Iran, Karaj, Iran

4- Department of Immunotherapy and Leishmania Vaccine Research Pasteur Institute of Iran, Tehran, Iran

5- Department of Immunotherapy and Leishmania Vaccine Research Pasteur Institute of Iran, Tehran, Iran

Abstract

Background: Leishmaniasis is a parasitic disease.There is still no vaccine for use in humans. Nevertheless, in these cases of the vaccination strategies the main problem remain to be the concerns relating to feasibility for large-scale use in the field and reduced potency due to the lack of stability within the storage period. Therefore, we used lyophilization methods for recombinant leishmania (Enhanced Green Fluorescent Protein expression) to assess the possibility to provide lyophilized parasite with features such as easy transportation, long-term storage, maintain immunogenicity and effective production cost. For evaluation of the morphological characteristic of the lyophilized parasite, EGFP expression, a validated technique is needed in order to fix the parasite while conserving EGFP protein that was expressed during the growth phases.Using this method the cells those expressed EGFP will be detectable by fluorescence microscopy and viability determination of the formulations will be accurately possible.

Material and methods: Biological properties of the lyophilized formulations were investigated through viability testing detecting the EGFP expression in the parasites using florescent microscopy.For this purpose, para-formaldehyde 1% was used for the fixation of the EGFP expressing leishmania parasite. For the preparation of the para-formaldehyde solution, mili Q water was added to 125 mg para-formaldehyde and stirred at 55°C for 25-30 min, then NaOH 1N was added to obtain a completely clear solution and the pH was fixed to 7.20. To observe the amastigote form of parasites in macrophage cells by PFA fixation method, THP 1 cell line was used and infected with the lyophilized parasites in multiplicity of infection (MOI) (1:10 cell to parasite ratios), 250 µl of PFA 1% solution was added to each well and incubated at the room temperature for 10 min.The supernatant was removed and the digital images of macrophage cells were taken with an Epi-fluorescence microscope (Nikon, E200, Japan). For the visualization of the promastigote form of parasite, centrifuged 300 µl of the lyophilized leishmania parasite after reconstitution in M199 medium supplemented with 5% hi-FCS, then 250 µl of PFA 1% solution was added to parasite pellet. The digital images of the parasite cells were taken with an Epi-fluorescence microscope.The parasite viability at amastigote or promastigote stage was calculated using following equation: % viability= (mean EGFP expression cells/mean all cells)×100

Results : Fixation technique of the amastigote and promastigote form of recombinant leishmania (EFGP expression) enabled counting the parasite cells to determine the viability of the lyophilized formulations while preserving the green fluorescent protein inside the cells to be visible and traceable by fluorescent microscopy.The lyophilized parasites that preserved EGFP protein were considered viable.Comparison between the para-formaldehyde fixation and trypan blue staining showed fixation by para-formaldehyde is accurate and efficient method to evaluate the promastigote form of recombinant lyophilized leishmania parasites.

Conclusion : For many years, different fixation methods have been used for different microorganisms such as bacteria, yeast and tissue cell.There are limited attempt for parasite fixation especially for leishmania spp.This study demonstrated a validated method for the fixation of leishmania parasite to determine the viability of a lyophilized formulation containing leishmania.

Keywords : Lyophilization, Fixation, PFA, Leishmania parasite

PP-88

Relationship between Titres of HS-CRP and Anti-Toxoplasma gondii IgM Antibody of Sera in Childbearing age's women

Seyed Hossein Hejazi[1], Mehran Bahadoran Bagh Badorani[2], Fatemeh Ghadamgahi[3]

1- Skin Diseases and Leishmaniasis Research Center, Isfahan University of Medical sciences, Isfahan, Iran

2- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran

3- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran

* Corresponding author**:** Seyed Hossein Hejazi

Skin Diseases and Leishmaniasis Research Center, Isfahan University of Medical sciences, Isfahan, Iran. **Email:** hejazi@med.mui.ac.ir

Abstract

Background and Aim : Toxoplasmosis is a zoonotic disease caused by Toxoplasma gondii parasite. Acquired toxoplasmosis is self-limited while congenital form affects pregnant women without any previous exposure to the parasite. It can be harmful to the foetus leading to spontaneous abortion or moderate to severe physical or mental abnormalities in the neonate. Chronic or acute infections are detected by titrating the serum levels of different IgG and IgM anti-Toxoplasma antibodies.The aim of this work was study of relationship between titres of HS-CRP and Anti-Toxoplasma IgM Antibody of Sera in Childbearing age's women referred to Clinical Laboratories in Tehran.

Material and methods: We recruited 900 women and used two commercial ELISA kits for IgM detection and its titration in serum-positive patients. Concentration of HS-CRP in positive sera was determined by using invigorated two-point turbidometry test by an Analyser, and two commercial kits used for calibration and control of CRP. Samples were measured by using a photometer device.

Results : Titres of IgM in 51 positive cases were 1.3 IU/mg up to 19.9 IU/mg and concentration of HS-CRP were 190.0 mg/lit & 15.0 mg/lit respectively, but only 6% of 51 IgM negative controls showed higher titers of normal HS-CRP. Significant statistical coherency was exposed between these two sera factors.

Conclusion: Due to the relationship between levels of CRP and presence of specific IgM anti-Toxoplasma antibody in patients with chronic or acute toxoplasmosis, supplementary use of HS-CRP in patients with positive specific anti-Toxoplasma IgM screening.

Keywords: HS-CRP, IgM, Anti-Toxoplasma antibodies, Sera, Childbearing age

PP-89

Sero Molecular Prevalence study of Toxoplasma infection in Beta-thalassemia major patients using ELISA and LAMP methods in 2015

Houman Hanifehpour[1], Hooman Hanifehpour[2], Vafa Saber[3], Shahram Khosravi[4], Seyed kamal samsam shariat[5], Mohammad saleh Ghafari[6]

1-Shahrekord University of Medical Science

2- Food and Drug Administration,Section of Biological Control

3- Beheshti University of Medical Science

4- Food and Drug Administration, Head of Biological Control and Laboratory

5- Student of Shahrekord University of Medical Science

6- Student of Shahrekord University of Medical Science

* Corresponding author**:** Houman Hanifehpour

Shahrekord University of Medical Science. **Email:** hoomanhanifehpour@yahoo.com

Abstract

Background: Toxoplasma infection is one of the most prevalent and serious infectious diseases in immunodeficiency persons such as in beta-thalassemia major patients. The study was carried out to determine the sero-prevalence of anti-Toxoplasma antibodies in beta-thalassemia major patients.

Material and methods: A total of four hundred and seventy serum samples were collected from beta-thalassemia major patients referring to Hajar hospital in Shahr-e-kord,Iran as the test group and healthy individuals as the control group (i.e. each group consisted of 235 samples).The demographic data were collected via questionnaire forms and the sera and blood samples were examined for specific anti-Toxoplasma antibodies(IgM,IgG) using ELISA and LAMP method. The processing of data was accomplished by the software, SPSS ver.20 and analysed by the Chi-square test, Independent T test and Logistic regression model.

Results: Out of 235 sera belonged to the beta-thalassemia major patients, 122(51.9%) and 8(3.4%) sera were positive for anti-Toxolasma IgG and IgM antibodies, respectively. However, these positivity rates were 82(34.8%) and 5(2.1%) for anti-Toxoplasma IgG and IgM in the control group. There were significant differences between sex, age, contact with cat, job, Meat consumption in case group ($p<0.001$) and also There were significant differences between sex, age and Meat consumption in control group ($p<0.001$). Also molecular results showed that 14(5.95%) positive in control group and 23(9.78%) positive in case group.

Conclusion: It is likely that the majority of Toxoplasma infections in beta-thalassemia major patients have been occurred prior to their malignancy. However, malignancy may reactivate the latent Toxoplasma infections and predispose the patients for acute systemic infection.

Keywords: Toxoplasmosis-ELISA-LAMP-Beta-thalassemia major

PP-90

Comparison between routine diagnostic methods in intestinal protozoa (Giardia-Entamoeba histolytica) with copro antibody and antigen and blood antibody methods

Mona Roozbehani[1], Mohammad Javad Gharavi[2]

1- PhD Student of Medical Parasitology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran.

2- Professor of Medical Parasitology, Faculty of Allied Medicine, Iran University of Medical Sciences, Tehran, Iran.

* Corresponding author**:** Mona Roozbehani

PhD Student of Medical Parasitology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran. **Email:** mona.roozbehani@yahoo.com

Abstract

Background: Giardia lamblia and Entamoeba histolytica is the most prevalent human intestinal protozoan in worldwide. Clinical giardiasis infection are acute diarrhea, chronic diarrhea and malabsorption syndrome. Entamoeba histolytica invades the intestinal tract without causing clinical symptoms And can also spread to the liver and other organs. Therefore, important to diagnose protozoan, modern and routine diagnostic methods will be compared in our study.

Material and methods: In comparative analysis study in 1391 year, stool and blood sampling was collected from1025 patients referred to 3 Laboratories that located in Tehran and Karaj cites for 7 months. Detergent concentration formalin test was performed on all samples. positive samples of this method tested by stool antigen and antibody ELISA method. Also, serum samples were taken for check histolytica and Giardia antibodies in the blood of patients with positive stool.

Results: out of 1025 stool sample, 76 cases (4/7%) Giardia, 19(1/8%) E.histolytica, were positive by Formalin-detergent method. coproantibody Giardia 81(7/9%), coproantibody E.histolytica 24(2/3%), coproantigen Giardia 78(7/6%), coproantigen E.histolytica 5(0/4%) and blood antibody E.histolytica 22(2/1%) were identified by ELISA method.

Conclusion: Sensitivity of microscopic method than serologic method is higher than 90%. Therefore, Formalin-detergent method is selected as the best method for stool examination.

Keywords: Giardia lamblia, Entamoeba histolytica, coproantibody, coproantigen, blood antibody.

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-91

Frequency of Intestinal Parasitic Infections among Individual referred to the medical Center Laboratories in Ahvaz City,Khouzestan Province , South west IRAN,2014-2015

Roya Saleh[1], Roya Salehi[2], Ali Haghighi[3], Eznoaalah Azargashb[4], Jasem Saki[5], Hamed Kiani[6], Neda Ghorabi[7]

1-Shahid Beheshti

2-Tehran,Medical Shahid Beheshti University

3-Tehran,Medical Shahid Beheshti University

4-Tehran, Medical Shahid Beheshti University

5-Jondi Shapour Ahvaz University

6-Tehran,Medical Shahid Beheshti University, Iranian Veterinary organization,Hamedan

7-Jondi Shapour Ahvaz university

* Corresponding author**:** Roya Saleh

Shahid Beheshti. **Email:** royaarta@yahoo.com

Abstract

Background: Intestinal parasites of humans are one of the most important health problems worldwide, especially those located in tropical and subtropical areas . Frequency of intestinal parasites in individuals referred to medical center laboratories in Ahvaz city during 2014-2015 was studied

Material and methods : 618 stool samples were collected and examine by using direct wet mount, formalin-ether concentration, a modified version of the Ziehl-Neelsen staining technique and culture in Xenic media. The results were analyzed using SPSS version 16 and Chi-square test.

Results: 325 (52.6%) of the patients were male and 293 (47.4%) were female. At least one pathogenic or nonpathogenic intestinal parasites were observed in 201 (32.5%) of the studied samples. Protozoan parasites were seen in 198 (32%) of the specimens, while only 3 (0.48%) of patients were infected with helminthes. Blastocystis sp. 116 (18.7%); Endolimax nana 34 (5.5%); Entamoeba coli 32 (5.17%); Giardia intestinalis, 26 (4.2%); Chilomastix mesneli,3 (0.48%), Cryptosporidium spp., 2 (0.32%); Entamoeaba histolytica/Entamoeba dispar, 2 (0.32%); Dientamoeba fragilis, 1 (0.16%); Hymenolepis nana, 2 (0.32%) and Oxyur, 1 (0.16%) were the observed parasites. In 38 (6.1%) of the positive samples, co-infections with two parasites were found.

Conclusion: The frequency of protozoan parasites was significantly higher than helminthes ($P < 0.001$). Blastocystis was the predominant intestinal parasite detected in referred individuals. The results indicated that the intestinal parasites, particularly helminthes infections have been significantly declined in recent years.

Keywords: Frequency, Intestinal parasitic infections, Ahvaz, Iran.

PP-92

Survey on Cryptosporidium infection and detection of C. parvum in neonatal calves by using ELISA in shahrekord provinc

Omid Mardanshah[1], o mardanshah[2], SH Hejazi[3]

1-Department of Parasitology & Mycology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

2-Department of Parasitology & Mycology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

3-Department of Parasitology & Mycology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

* Corresponding author**:** Omid Mardanshah

Department of Parasitology & Mycology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran. **Email:** mardaniomid@yahoo.com

Abstract

Background: The apicomplexan genus Cryptosporidium comprises species that affect humans and a wide variety of animal hosts, including livestock. Cryptosporidium parvum is the most important zoonotic species within the genus of Cryptosporidium. There are a variety of methods, including microscopy, immunological and molecular techniques for the detection of Cryptosporidium oocyst. This study was conducted for the detection of Cryptosporidium ssp and C. parvum infection in neonatal calves.

Material and methods: A total of 220 fecal samples diarrheic of neonatal calves were collected from shahrekord provincePresence of Cryptosporidium spp. oocysts in fecal samples was detected using the modified Ziehl-Neelsen staining technique.ELISA was used to demonstrate the presence of Cryptosporidium parvum oocys.

Results: Total number of positive specimens was 41 by modified acid-fast staining method, and 33 samples were positive for c.parvum by using ELISA that giving 18.6 % and 80.4 % prevalence, respectively. All of the acid-fast positive specimens showed positive reaction with specific anti- Cryptosporidium parvum monoclonal antibody.

Conclusion: Through these findings, C. parvum was recognized as a serious source to cause neonatal calf in shahrekord province,iran. Appropriate strategies should be taken to maintain the health status of calves.

Keywords: Cryptosporidium,neonatal calves,ELISA

PP-93

Outbreak of Cryptosporidium Parvum infection in children in Jahrom city

Zahra Kargar jahromi[1], Kargar Jahromi Zahra[2], Solhjoo Kavous[3], Davami Mohamad Hassan[4], Abiri Rakhshan[5], Kargar Jahromi Hossein1[6]

1-Zoonosis Research Center, Jahrom University of Medical Sciences, Jahrom, Iran

2- Zoonoses Research Center, Jahrom University of Medical Sciences, Jahrom, Iran

3- Zoonoses Research Center, Jahrom University of Medical Sciences, Jahrom, Iran

4- Zoonoses Research Center, Jahrom University of Medical Sciences, Jahrom, Iran

5- Student Research Committee,Jahrom University of Medical Sciences,jahrom, Iran

6- Zoonoses Research Center, Jahrom University of Medical Sciences, Jahrom, Iran

* Corresponding author**:** Zahra Kargar jahromi

Zoonosis Research Center, Jahrom University of Medical Sciences, Jahrom, Iran. **Email:** sima.kargar@yahoo.com

Abstract

Background: Cryptosporidium parvum is an apicomplexan parasite and it has emerged as an important cause of diarrhoeal illness in the world, particularly amongst children(1-2). The aim of this study is determination of outbreak of Cryptosporidium parvum infection in children with acute diarrhea in Jahrom city by Nested PCR method.

Material and methods: In this study, 200 stool specimens from children under 12 years that referred to Jahrom laboratory centers in 2014 were examined by Nested PCR method for the presence of Cryptosporidium parvum. The data were analyzed using SPSS 16 software.

Results: In this study, 3 children (1%) were diagnosed with Cryptosporidium parvum. The Positive samples related to 2 girls under 3 and 1 boy under 4 years.

Conclusion: It was observed that the percentage of low contamination to this parasitis stating that this parasite doesnt count as a public health problem in Jahrom yet.

Keywords: Cryptosporidium Parvum, children, Nested PCR.

PP-94

Molecular detection of Blastocystis spp. in pigeon (Colombiocola colombe): implication for zoonosis transmission.

Ali asghari[1], Javid sadraei[2], Majid pirestani[3]

1-M.Sc.Student, Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran

2-Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran

3-Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran

* Corresponding author**:** Ali Asghari

M.Sc.Student,Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran. **Email:** a.asghari@modares.ac.ir

Abstract

Background: Blastocystis is a opportunistic parasite that causes zoonotic disease in human and many of mammal and bird species.Aim of this study is molecular detection of Blastocystis spp. in pigeon (Colombiocola colombe): implication for zoonosis transmission.

Material and methods: In this study the 60 samples were collected from cage to cage (one by one, individually) from the pigeon around the Tehran province.The Samples were kept in a 2.5% solution of potassium dichromate. After transferring the samples to the laboratory, we washed them and DNA extraction was performed by manual method (CTAB) and with freeze and thaw method. In the final step the samples were examined by NESTED_PCR method.

Results: Totally,from 60 samples, 25 of them (42%) were infected to Blastocystis.

Conclusion: Since the Blastocycstis is pathogenic and opportunistic parasite and pigeon living near the human so there is possibility of human infection and zoonotic disease.

Keywords: Blastocystis,Pigeon,Nested_PCR

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-95

Detection of Cryptosporidium spp. in equines of Ardabil province: implication for zoonosis significance(2015).

Ali asghari[1], Majid pirestani[2], Hasan ebrahimzadeh[3], Javid sadraei[4], Mehran mirza-ghavami[5]

1-M.Sc.Student,Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran

2- Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran

3- M.Sc.Student,Department of Medical Parasitology and Mycology,School of Public Helth.Tehran University of Medical.Tehran,Iran

4- Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran

5- Ph.D.Student,Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran

* Corresponding author**:** Ali Asghari

M.Sc.Student,Department of Parasitology and Medical Entomology,Faculty of Medical Science,Tarbiat Modares University,Tehran,Iran. **Email:** a.asghari@modares.ac.ir

Abstract

Background: Cryptosporidium is one of the important zoonotic parasitic disease that infect a wide variety of mammal and bird species.However,limit information is available about prevalence of Cryptosporidium spp.In equine hosts in Iran.Aim of this study is detection of Cryptosporidium spp. in equines of Ardabil province: implication for zoonosis significance(2015).

Material and methods: In this study the 71 samples were collected from horses and donkeys of Ardabil province (37 samples of horses and 34 samples of donkeys).The Samples were kept in a 5% solution of potassium dichromate. After the samples were transported to the laboratory.The samples to be smooth with using two layers of sterile gauza that removed the additional materials and grasses until to obtain smooth stool of samples. In the next step we strew some of the samples on the lam after the samples were deried on the lam we fix them with methanol and then the samples were stained (colored) with modified Ziehl_Neelsen. In the final step, we detected microscopically painted samples.

Results: Totally from 37 horses samples, 36 samples were found to be infected Cryptosporidium and 34 donkeys samples were found to be infected Cryptosporidium.

Conclusion: Since the Cryptosporidium is parasitic and opportunities disease and on the other side because these animals (horses and donkeys) living near the human so there is a possibility of human infection and zoonotic disease.

Keywords: Cryptosporidium,Equines,Detection

PP-96

A survey on cutaneous leishmaniasis in the Khorasan-Razavi Province, northeast of Iran

Anita Mohammadiha [1], Abdolhossein Dalimi [2], Mohammaddreza Mahmoodi [3], Mehdi Mohebali [4], Majid Pirestani [5], Mohammad Parian[6]

1-Department of Parasitology and Entomology, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran

2-Department of Parasitology and Entomology, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran

3-Department of Microbiology and Parasitology, Faculty of Medicine, Guilan University of Medical Sciences, Rasht- Iran

4-Department of Medical Parasitology and Mycology , School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

5-Department of Parasitology and Entomology, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran

6-Department of Medical Parasitology and Mycology, Medical faculty, Mashhad University of Medical Sciences, Mashhad, Iran

* Corresponding author**:** Anita Mohammadiha

Department of Parasitology and Entomology, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran. **Email:** anita_mohammadiha@yahoo.com

Background: Cutaneous leishmaniasis (CL) is a widespread parasitic disease which has a high incidence rate in Iran. Leishmania tropica, the causative agent of anthroponotic cutaneous leishmaniasis (ACL), and Leishmania major, which causes zoonotic cutaneous leishmaniasis (ZCL), are endemic in various parts of Iran. Determining the epidemiological aspects of the disease is important for planning of control program. This cross-sectional study was designed to isolate of Leishmania spp. from cutaneous leishmaniasis patients who referred to Mashhad Health Centers from 2013 to 2014 and their species identification using ITS-PCR-RFLP technique. Physical examinations were performed in all suspected patients and CL cases were confirmed with microscopical examinations. A questionnaire was prepared and completed for each confirmed patient and DNA from each slide was extracted, separately.

Material and methods: Altogether, DNA was isolated from 94 Giemsa-stained smears. The ribosomal internal transcribed spacer was amplified with appropriate primers and PCR products were digested by enzyme Taq1 restrict enzymes, run them in 2 % gel agarose for electrophoresis and visualized on a UV transilluminator after staining with ethidium bromide. SPSS version 16 was used for data analyses. For Limit of Detection (LOD) of designed primers, a series of dilutions was performed, yielding DNA solutions corresponding to decreasing concentrations from 20 to 0.00001 parasite/µl diluted (6 log) by distilled water were used as standard DNA.

Results: Of 94 of CL patients, 51 cases (54.3%) were men and 43 of them (45.7%) were women. The most frequent age group was 20-29 years old (27.2%). Hands, face and feet were the most common sites for appearance of skin lesions. All of 97 cases (100%) tested positive by ITS-PCR-RFLP. Altogether, Leishmania species were identified in all of the 94 slides which 33 (35%) of them were L.major and 61 (65%) of the remained isolates were identified L.tropica using PCR–RFLP.By conventional PCR, LOD for ITS1-PCR was1–6 parasites/mL, while the method targeting ITS (MO) could detect 1 × 10-2 parasites/mL.

Conclusion: In conclusion, characterization of Leishmania isolates collected from different parts of Khorasan-Razavi province showed that L.tropica is predominant agents of CL especially in large and medium sized cities such as Mashhad and Shandiz is distributed in the most endemic areas of the cities. Moreover, this study revealed that ITS-PCR-RFLP based on our designed primers is a suitable method for characterization of Leishmania species.

Keywords: Cutaneous leishmaniasis, Human, ITS, Khorasan-Razavi province, Iran.

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-97

Molecular Diagnosis of Trichomonas vaginalis among Females with Typical Infection Symptoms

elham moradi[1], Abdolhossein Dalimi Asl[2], Javid Sadraee[3], Anita Mohammadiha[4]

1-Tarbiat Modares University - Faculty of Medical Sciences - Parasitology and Entomology Department

2-Tarbiat Modares University - Faculty of Medical Sciences - Parasitology and Entomology Department

3-Tarbiat Modares University - Faculty of Medical Sciences - Parasitology and Entomology Department

4-Tarbiat Modares University - Faculty of Medical Sciences - Parasitology and Entomology Department

* Corresponding author**:** Elham Moradi

Tarbiat Modares University - Faculty of Medical Sciences - Parasitology and Entomology Department. **Email:** elham.moradi4949@gmail.com

Abstract

Background: Trichomonas vaginalis is counted as one of prevalent intercourse diseases, which 170,000,000 infected individuals are reported annually. In order to certainly diagnose the infection of Trichomonas vaginalis, specific in vitro culture is used which requires adequate time. Nowadays, there are many molecular approaches to rapidly diagnose the infection of Trichomonas vaginalis. Purpose: The purpose of the present research includes the diagnosis of Trichomonas vaginalis among the infected women with the typical symptoms in Mahshahr City by using PCR technique.

Material and methods: In total, 500 urine samples of female referents to one of the hospitals in Mahshahr city were collected and then 30 samples with the typical clinical symptoms were analyzed and the molecular test was conducted by 18srDNA genetic replication using specific primers and PCR technique.

Results: All of the typical samples were diagnosed as positive by the molecular test in the DNA extraction and PCR test for 4 hours, in which the duration is significantly reduced compared with the in vitro culture methods.

Conclusion: By using the designed primer and the 18srDNA genetic replication, Trichomonas vaginalis could be detected in the urine with higher accuracy and sensitivity.

Keywords: Trichomonas - vaginalis - Typical Infection Symptoms

PP-98

Effects of hydro-alcoholic extract of Artemisia annua on Trichomonas vaginalis

Mina Ebrahimi[1], mina.ebrahimi[2], Javid Sadraei [3]

1-Department of parasitology,faculty of Medical sciences,Tarbiat Modares University,Tehran,Iran

2-Masters student, Department of parasitology, faculty of Medical sciences, Tarbiat Modares University, Tehran, Iran

3-Department of parasitology, faculty of Medical sciences, Tarbiat Modares University, P.O.BOX.14115-331 Tehran, Iran

* Corresponding author**:** Mina Ebrahimi

Department of parasitology,faculty of Medical sciences,Tarbiat Modares University,Tehran,Iran. **Email:** mina.ebrahimi@modares.ac.ir

Abstract

Background: Trichomonas vaginalis is one of the most common sexually transmitted disease worldwide. Metronidazole and tinidazole are two choice drugs for the treatment of human trichomoniasis. Beside several side effects of metronidazole and tinidazole (e.g., carcinogenic, teratogenic, and embryogenic effects), some reports of T. vaginalis drug-resistant have been reported in clinical samples. Therefore, the search for new drugs to overcome these problems is needed. Objective: This study aims to evaluate the effect of Artemisia annua on T. vaginalis in in-vitro.

Material and methods: Materials and Methods: A clinical isolate of T. vaginalis was cultured in TYM (Trypticase Yeast Extract) medium supplemented with 10% bovine serum. The effect of A. annua hydro-alcoholic extract in concentrations of 1, 2, 4 and 5 mg/ml were evaluated on T. vaginalis in two time points; 24h and 48h. Metronidazole drug is used as standard drug at concentrations of 0.03, 0.06, 0.12, 0.25, 0.5 and 1 µg/ml. Live parasites were stained with trypan blue and their numbers were counted using a hemocytometer. Then the value of IC50 was calculated using Prism software for both groups.

Results : Results: A. annua extract in concentration of 5mg/ml has the inhibitoriest effect on T. vaginalis after 48h.The IC50 values of Artemisia annua extracts and Metronidazole were calculated as 1.18 and 0.62 respectively.Our studies showed that different concentrations of A. annua extract have a good anti T. vaginalis activities. Hence, future studies for clinical evaluation of A. annua recommended.

Conclusion: Conclusion: Drug resistance of T. vaginalis to metronidazole and side effect of this drug, using of Herbal Medicines in T. vaginalis treatment will be useful.

Keywords: Trichomonas vaginalis, Artemisia annua , hydro-alcoholic extract

PP-99

Experimental study of Theileria and Babesia infection in salivary glands of vector ticks by histological technique

Mohammad Eslampanah[1], Mohammad Abdigoudarzi[2], Mohammad Hasan Hablolvarid[3], Gholamreza Motamedi[4], Mohammad mahdi Gharagozloyan[5]

1-Razi Vaccine and Serum Research Institute

2-Razi Vaccine and Serum Research Institute

3-Razi Vaccine and Serum Research Institute

4-Razi Vaccine and Serum Research Institute

5-Razi Vaccine and Serum Research Institute

* Corresponding author**:** Mohammad Eslampanah

Razi Vaccine and Serum Research Institute. **Email:** m.islampanah@rvsri.ac.ir

Abstract

Background: According to search and prove carriers' ticks to pathogenic protozoa by separating suspected salivary gland and demonstration of with histological methods is not required to abundance cost and budget, can be set up by histological method and putting it in primarily, along with molecular methods -as a standard method- and continuing for the next steps in pathology department and tick reference laboratory of Razi Vaccine and Serum Research Institute, it can be used as a diagnostic method to prove infection. Therefore, by using of epidemiology data of disease in Iran and on the basis of projects carried out abroad, survey of carriers' tick status and types of pathogens(Theileria and Babesia) that transmitted by ticks in different regions of Iran is essential.

Material and methods: Adult infected ticks with blood protozoa (Theileria and Babesia) and the number of non-infected ticks were used as a control. Ticks were separately taken on Sheep; a number of fed ticks the feeding ticks were examined. Then, during the period (1-9 days) to continue feeding and re-sampled. Ticks were isolated from sheep and placed in glass vials containing 70% ethanol to be identified. Collected samples were studied and identified morphologically. Dorsal exoskeleton removed with a scalpel and salivary glands were separated by suitable forceps.Primary study was done on salivary gland by using wet smear and a compound microscope with appropriate staining. Then Salivary glands were fixed in 10% formalin to study by light microscopy. Samples were stained with hematoxylin-eosin (H&E) and feulgen stains as specific staining for investigation under light microscope.

Results: The results were emphasized be histological methods can also a simple way to determination of infection in some species of theses blood protozoa.

Conclusion: The molecular method will not distinguish sporoblast in the salivary gland as the primers have genomic targets, therefore the best way to have proved this effect would have been to dissect the salivary glands from the ticks.

Keywords: Histological method, salivary gland, Theileria, Babesia

PP-100

Identification of Leishmania infantum in Ctenocephalides spp of dogs in Meshkinshahr

Amrollah azarm[1], Abdolhossin Dalimi asl[2], Mahdi Mohebali[3], Anita Mohammadiha[4], Zabihollah Zarei[5]

1-Department of Medical Parasitology and Entomology, Faculty of Medical Sciences of Tarbit Modares University, Tehran, Iran

2- Department of Medical Parasitology and Entomology, Faculty of Medical Sciences of Tarbit Modares University, Tehran, Iran

3- Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical sciences, Tehran, Iran.

4- Department of Medical Parasitology and Entomology, Faculty of Medical Sciences of Tarbit Modares University, Tehran, Iran

5- Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical sciences, Tehran, Iran.

* Corresponding author**:** Amrollah Azarm

Department of Medical Parasitology and Entomology , Faculty of Medical Sciences of Tarbit Modares University, Tehran, Iran. **Email:** Amrollahazarm@yahoo.com

Abstract

Background: Introduction Fleas are the most important vectors of human and animal pathogens, including bacteria, viruses and protozoa. Some animals, like dogs, may play an important role as interface hosts for transfer fleas of different wild, domestic animals and humans. The aim of the present study was to assess the Leishmania infantum infection in Ctenocephalides spp of dogs in Meshkinshahr country.

Material and methods: A total of 20 domestic dogs was randomly selected. Fleas were collected using brushing against the hair of dogs. In some cases, the ectoparasites were collected by the use of forceps. Collected fleas were studied morphologically then preserved in 70% ethanol for molecular identification. In PCR assay the kDNA gene was amplified using LIN primers.

Results: Two species were identified morphologically, of which Ctenocephalides canis was the most common flea infesting 100% dogs and C.felis was identified on 35%. The results of PCR assay and sequence analysis indicated that Ct.canis of 75% and Ct.felis of 66.67% of infected dogs were found to be positive for L.infantum.

Conclusion: The results of PCR assay and sequence analysis indicated that Ct.canis and Ct.felis of infected dogs were found to be positive for L.infantum.

Keywords: Flea, Ctenocephalides canis, C.felis, Leishmania infantum, kDNA, Meshkinshahr

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-101

Soil contamination with soil transmitted helminthes in schools and play areas in Kermanshah city, west of Iran

Mohammad Ali Mohaghegh[1], Mohsen Ghomashlooyan[2], Mohammad Reza Vafaei[3], Mohammad Falahati[4], Seyed Hossein Hejazi[5]

1-Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

2- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

3- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

4- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

5- Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran.

* Corresponding author**:** Mohammad Ali Mohaghegh

Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran. **Email:** mohaghegh1982@yahoo.com

Abstract

Background: Geohelminth infections are among the most common infections worldwide. These helminthes are parasitic nematodes which could infect humans and animals by contact with eggs or infective larvae and in some cases cause serious disorders, especially in children.

Material and methods: This study was carried out in Kermanshah city which located in the west of Iran, during September to December 2014 in order to evaluate the prevalence of geohelminth eggs in the soil of schools and play areas. One hundred and ninety two soil samples were collected from 24 primary schools and 24 play areas from four different parts of each place. Diagnosis of geohelminthes was confirmed by the recovery of their eggs by flotation technique using sucrose solution and examined under light microscope using 10X and 40X objectives.

Results: Out of 192 soil samples, soil of play areas from four regions was contaminated with geohelminth eggs. The rate of soil contamination with Trichuris spp. eggs was 3.12% and hook worm eggs was 2.1%, but no Ascaris eggs was found in the examined soil samples.

Conclusion: Based on the results of this study there is a risk of infection with soil transmitted helminthes among children in Kermanshah, Iran.

Keywords: Soil, Geohelminth, Kermanshah, Iran

اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
و
هشتمین کنگره بین المللی
آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-102

Cloning and expression of Cathepsin L1 as the major excretory-secretory protein of Fasciola hepatica and application for serodiagnosis of fasciolosis

Kobra Mokhtarian[1], Reza Falak[2], Lame Akhlaghi[3], Ahmad Reza Meamar [4], Elham Razmjou[5]

1-Iran University of Medical Science

2-Iran University of Medical Science

3-Iran University of Medical Science

4-Iran University of Medical Science

5-Iran University of Medical Science

* Corresponding author**:** Kobra Mokhtarian

Iran University of Medical Science. **Email:** k.mokhtarian@yahoo.com

Abstract

Background: Fasciolosis is caused by liver flukes of the genus Fasciola. Recent studies estimates that as many as 2.4 million people are at the risk of this infection. Most of excretory-secretory contents of F. hepatica consists of cysteine proteases. Among those molecules, Cathepsin-L1 is the hallmark protein. A recombinant form of Cathepsin-L1 could provide more reasonable results in ELISA for serodiagnosis of human fasciolosis than total extracts.

Material and methods: Total RNA was purified from fresh adult liver flukes and used for cDNA synthesis. The coding sequence of Cathepsin L1 was inserted in pET-21 and the recombinant protein was expressed in BL-21. Sera from 40 healthy individuals as well as 15 fasciolosis patients and also 63 patients with viral, bacterial or other parasitic diseases was used for evaluation of cross-reactivity via an in-house made indirect ELISA method.

Results: Immunoreactivity studies showed 100% sensitivity and 97% specificity for determination of human fasciolosis by Cathepsin L1. However, cross-reactivity studies revealed that 3 out of 8 hydatidosis patients' sera had a considerable reactivity with recombinant Cathepsin L1 of F. hepatica.

Conclusion: Cathepsin-L1 is a high sensitive and high specific molecule for serodiagnosis of fasciolosis and could be good choice for sero-detection of fasciolosis in endemic areas. Meanwhile, the cross-reactivity of Fasciola hepatica and Taenia echinococcus should be considered for interpretation of the results.

Keywords: Cathepsin L1; Fasciola hepatica; Recombinant protein

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-103

Genotyping of Hydatid Cyst Isolated from Human and Sheep In Ilam Province Southwest of Iran

Morteza Shamsi[1], Abdolhossein Dalimi[2], Afra Khosravi[3], Fatemeh Ghafarifar[4]

1-Department of Parasitology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

2-Department of Parasitology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

3-Department of Immunology, Faculty of Medicine, Ilam University of Medical Sciences, Ilam, Iran

4-Department of Parasitology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

* Corresponding author**:** Morteza Shamsi

Department of Parasitology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran. **Email:** Shamsi_ilam@yahoo.com

Abstract

Background: Hydatid cyst disease is a chronic zoonotic caused by the larval stage of the dog tapeworm, Echinococcus granulosus. The aim of this study was to identifying genotype of E. granulosus isolates from human and sheep hydatid cysts in Ilam province using PCR-RFLP method.

Material and methods: A total of 10 human and 20 sheep protoscoleces hydatid cyst samples were collected from diffrent hospitals and Industrial slaughterhouses of the province. After extraction DNA genom by extraction kit, all samples examined by PCR-nad1 and cox1 of mitDNA and PCR products were analyzed using AluI, HpaII and RsaI restriction enzymes

Results: The fragments of 550bp and 450bp were obtained from amplification of mitDNA-nad1 and cox1 from all isolates using PCR method. After cutting of PCR product nad1 gene by AluI and RsaI enzymes,200bp and 350bp, size were obtained. HpaII enzyme there was no change in the size and it remained 550bp. Digestion of PCR product cox1 gene by AluI and HpaII enzymes, fragments were obtained with the size of 150 bp and 300 bp. RsaI enzyme hd no changed in band size and it fixed 450bp.

Conclusion: Based on the PCR-RFLP method human and sheep samples indicated to pertain to the genotypic similarities between the size of DNA bands appeared to the occurrence of same genotypes of E.granulosus in Ilam Province.Acording to obtaine results, there is at least one genotype of parasite, which belongs to E. granulosous sensu stricto (G1-G3) complex and and G1 genotype (sheep strain) is dominant genoype of human and livestock in Ilam province.

Keywords: Echinococcus granulosus, Hydatid csyt, Restriction Enzymes, PCR-RFLP, Ilam

PP-104

Prevalence of Blastocystis hominis infection in Karaj in 2013-2014

Taher Elmi[1], Shirzad Gholami[2], Behnaz Ghorbanzadeh[3], Mehdi Najm[4], poorya karimi[5], Zahra Geraili Afra[6]

1-Department of Parasitology and Mycology, Iran University of Medical Sciences, Tehran, Iran

2-Toxoplasmosis Research Center, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

3-Department of pathology, Faculty of Veterinary Medicine, Urmia University, Urmia

4-Department of Parasitology and Mycology, Iran University of Medical Sciences, Tehran, Iran

5-Department of Parasitology and Mycology, Iran University of Medical Sciences, Tehran, Iran

6-. Department of Biostatistic, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author**:** Taher Elmi

Department of Parasitology and Mycology, Iran University of Medical Sciences, Tehran, Iran. **Email:**Elmi1364@yahoo.com

Abstract

Background: Background & Aims: Blastocystis hominis, a protozoan whose pathogenicity has been questioned, is sometimes found in the human gastrointestinal tract.which has a worldwide distribution and is often isolated from fecal samples in the parasitology laboratory. Given the relatively high prevalence and emphasis on pathogenic of Blastocystis hominis especially in immunocompromised patients in recent studies, this study was performed to investigate the prevalence of Blastocystis hominis in Karaj in 2013-2014.

Material and methods: Materials & Methods: In this descriptive study, 2500 stool samples were screened for Blastocystis hominis. stool samples from each of the cases were examined 3 times using direct examination with saline and lugol, staining with trichrome and formalin-ethyl acetate concentration method.

Results: Results: A total of 2500 cases, 345 (13/8%) had Blastocystis hominis positive. The most common symptoms in cases that showed only Blastocystis hominis were Anorexia.

Conclusion: Conclusion: B. hominis is an anerobic protozoan parasite that inhabits the gastrointestinal tract of humans. The organism has four different distinct parasite forms-the cyst forms, the ameboid forms, the granular forms and the vacuolar forms. According to this study, B. hominis infection was the most common parasitic infection that it might have a role in some pathological conditions, resulting in gastrointestinal symptoms. Therefore, the use of appropriate diagnostic laboratory procedures in hospitals and medical centers can provide effective and accurate diagnosis that it will play an important role in the promotion of community health.

Keywords: Keywords: Blastocystis, Prevalence, Karaj.

PP-105

Comparison of metronidazole with Nano- Chitosan and chloroformic extract of Tanacetum parthenium in the treatment of Giardia lamblia infection in Balb/c mice

Taher Elmi[1], Shirzad Gholami[2], Saeideh Nikpour[3], Bahman Rahimi[4], Zahra Geraili Afra[5]

1-Department of Parasitology and Mycology, Iran University of Medical Sciences, Tehran, Iran

2-Toxoplasmosis Research Center, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

3-Department of Parasitology and Mycology, Iran University of Medical Sciences, Tehran, Iran

4-Department of Parasitology and Mycology, Tehran University of Medical Sciences, Tehran, Iran

5-Department of Biostatistic, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author**:** Taher Elmi

Department of Parasitology and Mycology, Iran University of Medical Sciences, Tehran, Iran. **Email:** Elmi1364@yahoo.com

Abstract

Background: Giardia lamblia is an intestinal protozoan parasite that finding a reliable diagnostic method and drug to Treatment giardiasis is important. Metronidazole is used to treat the infection by prescribing medication; this drug has many side effects. Thus, according to the importance of Giardiasis, the present study was aimed to investigate the effects of Nano-chitosan and chloroformic extract of Tanacetum parthenium in the treatment of Giardia lamblia infection in the cyst stage in Balb/c mice.

Material and methods: In this study, Nano-Chitosan and chloroformic extracts of T. parthenium were prepared in 20, 50 and 100 mg⁄ml concentrations, then 2×105 cysts were fed to 50 Balb/ c mice in 10 groups except negative control group.the nano particle and chloroformic extracts of plant were affected once a day for three days in infected mice and the effectiveness them was evaluated until the eight days.

Results: According to this study, Nano-Chitosan at a dose of 100 µg/ml is capable of removing G. lamblia cysts(84%). The greatest effect of chloroformic extracts of T. parthenium on Giardia was observed at a concentration of 100 mg/ ml in the infected mice, of which 70% concentrations were treated (P< 0.05).It also became clear that chloroformic extract of Tanacetum parthenium increase the effect of nanoparticle(91%).

Conclusion: According to results of this study, the Combination between Nano- Chitosan and chloroformic extract of T. parthenium after seven days has the highest effect in the treatment of G. lamblia infection in mice Balb/c. Due to good effect of Nano-Chitosan and chloroformic extract of Tanacetum parthenium in invivo conditions on the parasite G.lamblia and many side effects of metronidazole which have been reported, it can be introduced against Giardiasis. The combined therapy gave better results than single.

Keywords: Nanoparticle, Chitosan, Tanacetum parthenium, extract

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-106

Validation of a Sample Preparation Technique to Visualize the Leishmania parasite after lyophilization by fluorescence microscopy

Fatemeh Khalilinia[1], Khalilinia F[2], Doroud D[3], Taheri T[4], Rafati S[5]

1-Department of Biology, Damghan Branch, Islamic Azad University, Damghan, Iran **Email:** khaliliniap@yahoo.com

2-Department of Biology, Damghan Branch, Islamic Azad University, Damghan, Iran. and Department of the Quality, Production and Research Complex, Pasteur Institute of Iran, Karaj, Iran

3-Department of the Quality, Production and Research Complex, Pasteur Institute of Iran, Karaj, Iran

4-Department of Immunotherapy and Leishmania Vaccine Research Pasteur Institute of Iran, Tehran, Iran

5-Department of Immunotherapy and Leishmania Vaccine Research Pasteur Institute of Iran, Tehran, Iran

Background: Leishmaniasis is a parasitic disease.There is still no vaccine for use in humans.Nevertheless, in these cases of the vaccination strategies the main problem remain to be the concerns relating to feasibility for large-scale use in the field and reduced potency due to the lack of stability within the storage period.Therefore, we used lyophilization methods for recombinant leishmania(Enhanced Green Fluorescent Protein expression) to assess the possibility to provide lyophilized parasite with features such as easy transportation, long-term storage,maintain immunogenicity and economical.For evaluation of the morphological characteristic of the lyophilized parasite by the means of EGFP expression, a validated technique is needed in order to fix the parasite while conserving the EGFP protein that is expressed during the growth phases.Using this method the cells those expressed EGFP protein will be detectable accurately countable by fluorescence microscopy so that the viability determination of the leishmania parasite in the formulations will be accurately possible.

Material and methods: Biological properties of the lyophilized formulations were investigated through viability testing detecting the EGFP expression in the parasites using florescent microscopy.For the fixation of the recombinant leishmania parasite, para-formaldehyde(1%) was used. For the preparation of the PFA solution, miliQ water was added to 125mg PFA and stirred at 55°C for 25-30min. Afterwards, NaOH(1N) was added to obtain completely clear solution and the pH set at 7.20. To observe the amastigote form of the parasites in macrophage cells by PFA fixation method, THP1 cell line was infected with the lyophilized parasites in multiplicity of infection (MOI) (1:10cell to parasite ratios).Then 250µl of PFA1% solution was added to each well and incubated at the room temperature for 10min.The supernatant was removed and the digital images of macrophage cells were taken with an Epi-fluorescence microscope (Nikon, E200, Japan).For the visualization of the promastigote form of parasite, lyophilized leishmania parasite formulations were reconstitution with M199 medium supplemented with hi-FCS5% and the resulted suspension was centrifuged.Then 250µl of PFA1% solution was added to parasite pellets.The digital images of the parasite cells were taken with an Epi-fluorescence microscope.The parasite viability at amastigote or promastigote stages was calculated using following equation: viability %=(mean of the number of the EGFP expressing cells)/(mean of the total cells)× 100

Results : Fixation technique of the amastigote and promastigote form of recombinant leishmania enabled counting the parasite cells to determine the viability of the lyophilized formulations while preserving the EGFP inside the cells to be visible and traceable by fluorescent microscopy.The lyophilized parasites that preserved EGFP protein were considered viable.Comparison between the para-formaldehyde fixation and trypan blue staining showed that fixation method by PFA is an accurate and efficient method to evaluate the promastigote form of recombinant lyophilized leishmania parasites.

Conclusion: For many years, different fixation methods have been used for various cells containing microorganisms such as bacteria, yeast and tissue cell.There are limited attempt for parasite fixation especially for leishmania spp.This study demonstrated a validated method for the fixation of leishmania parasite to determine the viability of the microorganism after lyophilization.It is worth to mention that viability is an important quality characteristic in the vaccine production controls.

Keywords: Lyophilization, Fixation, PFA, Leishmania parasite

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-107

Unsaid problems eradication of malaria in ICME (intle.cong.mal.erad.)2012 kish(iland) with two eastern neighbours occurding in zahedan1999

masoume ebrahimi[1], zahra fallah[2], maryam azimi[3], zzhila nejati[4], roghaye sabori[5], fateme najafi[6], nafise gorji[7]

1-qazvin shahid bolan dian

2-qazvin shahid bolan dian

3-qazvin shahid bolan dian

4-qazvin shahid bolan dian

5-qazvin shahid bolan dian

6-qazvin shahid bolan dian

7-qazvin shahid bolan dian

* Corresponding author**:** Masoume Ebrahimi

qazvin shahid bolan dian. **Email:** ebrahimi.shiva88@gmail.com

Abstract

Background: malaria is the most problems'as healthy, economic, development and so on.In the world and prevention or eradication need to scientific methods. At now malaria in everywhere due to three major factors and several minor factors.the 3 major factors:1-patients (source of parasite).2-vector or mosquito (anophel).3-health person .And but the minors:area age,ecology,humidity and so on.

Material and methods: The aim of description study is problems eradication malaria in Iran with two eastern neighbours.

Results: Our country has at least 1000 km common frontier with them and unFurtunately many emigrants travel from frontier localities with high prevalence and it is most problem against eradication of malaria that will be explained of it

Conclusion: so that the agreement protection under W.H.O is essential necessary with two country neighbours for eradication

Keywords: eradication malaria neighbours frontier localities

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-108

Prevalence of gastrointestinal parasites in referred cases to Marlik laboratory in Malard Zoon

Hamid Hoseini[1], Shahrokh Shirazi[2], Tayebeh-Sadat Mostafaei3[3], Arash Soltani Borchaloee[4]

1-young researchs and elit club

2-Ph.D of Veterinary Parasitology

3-Student of Ph.D of Veterinary Parasitology, Urmia University

4-young researchs and elit club

* Corresponding author**:** Hamid Hoseini

young researchs and elit club. **Email:** dphamid5@gmail.com

Abstract

Background: Gastrointestinal parasites cause significant morbidity and mortality especially in undeveloped countries and in persons with comorbidities. The two main types of these parasites are those helminthes and protozoa that reside in the intestine (but not all of them). An intestinal parasite can damage or sicken its host via an infection. Giardia infection is an intestinal infection marked by abdominal cramps, bloating, nausea and bouts of watery diarrhea.it is caused by a microscopic parasite that is found worldwide, especially in areas with poor sanitation and unsafe water and Blastocystis is a highly controversial protozoan parasite. It has been variably regarded as a commensal and pathogen.

Material and methods: This survey was done between June-September 2014 on fecal samples of 379 cases that referred to Marlik laboratory

Results: 18 samples (4.75%) out of 379 were infected by gastrointestinal parasites. Two cases (0.53%) were infected by Giardia and 16 (4.22%) had Blastocystis in their fecal samples.

Conclusion: according to the results gastrointestinal parasites is a problem in public health yet, so more than education is needed for avoiding it.

Keywords: Prevalence, Marlik, Gastrointestinal Parasites.

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-109

Molecular identification and phylogenetic analysis among Leishmania Species isolated from Cutaneous and Canine Leishmaniasis based on rDNA ITS1 region in Iran

Aref Teimouri[1], Homa Hajjaran[2], Mehdi Mohebali[3]

1-Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

2-Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

3- Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

* Corresponding author**:** Aref Teimouri

Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran. **Email:** Aref_teimouri@yahoo.com

Abstract

Background: Introduction: Leishmaniasis consider as a neglected tropical disease that is endemic in the tropical and subtropical areas with a global annually incidence of 1.5 million. This study is aimed to determine the Inter and Intra variation among different isolates of leishmania sp, and indicate phylogenetic relationships among them in different foci of Iran.

Material and methods: Materials and Methods: One hundred seventeen DNA samples from cutaneous leishmaniasis (CL) patients and canine leishmaniasis cases (CanL) were amplified by directing a partial sequence of ITS1 region of rRNA gene. All PCR products were digested with Restriction Fragment Length Polymorphism (RFLP) assay, and 45 amplicons representing different hosts were sequenced and compared with similar sequences from GenBank database using of Basic Local Alignment Search Tool (BLAST).

Results: Results: The RFLP analysis showed that 60 and 48 CL patients were infected by Leishmania tropica and Leishmania major, respectively. Among 9 CanL isolates, 8 were identified as Leishmania infantum and one as L. tropica. DNA sequences were clustered into three groups representing L. major, L. tropica and L. infantum species, including 16 haplotypes. There is not any correlation between intra species divergence and geographic distribution of haplotypes. Highest

inter species similarity was seen between L. infantum and L. major. Also, the lowest similarity was seen between L. tropica and L. major.

Conclusion: Conclusion: the PCR-RFLP and sequencing methods explained in the current study are accepteble methods to distinguish Leishmania spp. in all type of clinical. Also, in our results different haplotypes of L. major, L. tropica and L. infantum were determined and these results showed that the L. tropica was more heterogeneous than the L. major and L. infantum.

Keywords: Key words: rDNA ITS1, leishmania, phylogenetic analysis, PCR- RFLP, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-110

Genotyping of Giardia duodenalis human isolates using PCR-RFLP in Zabul City, East of Iran

Maryam Abedi[1], mansoor dabirzade[2]

1-School of Medical Department of Microbiology

2-Iran University of Medical Sciences

* Corresponding author**:** Maryam Abedi

School of Medical Department of Microbiology. **Email:** abedi_6768@yahoo.com

Abstract

Background: Introduction:Giardiaduodenalis, a flagellated protozoan parasite, is the most prevalent human intestinal protozoa worldwide. About 200 million people in the world are infected with giardia spp. This study was conducted to determine the molecular epidemiology of the Giardiaduodenalisby PCR-RFLP method in Zabul city, Iran.

Material and methods: Methods:twenty-four stool samples were randomly selected from 215 patients diagnosed as giardiasis with microscopic examination. To raise the sensitivity of the PCR assay, the genomic DNA of each isolate was extracted using glass beads and the QIAamp Kit. A single step PCR-RFLP assay, targeting the glutamate dehydro-genase (gdh) locus, was used to differentiate within and between assemblages A and B in isolates.

Results: Results:The PCR fragment was determined from 30 isolates,RFLP assay of 24 isolates showed 24(100) isolates as Genotype B group BIII

Conclusion: Conclusions:The results with the glutamate dehydrogenase gene assaydemonstrated that the predominant subtype of G. duodenalisin the area is BIII that shows animals are the main reservoir of the isolates in this area

Keywords: Key words:Giardiaduodenalis, genotyping, glutamate dehydrogenase, Zabul, PCR-RFLP

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-111

Epidemiological Study of Toxocariasis in Children under 14 Years Old and Dog in Zabol and Chabahar districts, Southeast of Iran

Mahdi Khoshsima Shahraki[1], Mehdi Khoshsima Shahraki[2], Mansour Dabirzadeh[3]

1-Department of parasitology, school of medicen, Zabol university of medical science, Zabol, Iran

2-Department of parasitology, school of medicen, Zabol university of medical science, Zabol, Iran

3-Department of parasitology, school of medicen, Zabol university of medical science, Zabol, Iran

* Corresponding author**:** Mahdi Khoshsima Shahraki

Department of parasitology, school of medicen, Zabol university of medical science, Zabol, Iran. **Email:** KHOSH5844@YAHOO.COM

Abstract

Background: Toxocariasis is a parasitic infection caused by nematodes of the Toxocara genus of the roundworms family. The most common cause of this disease is Toxocara canis (dogs' Ascaris). Sistan and Baluchestan is one of the areas potentially at risk of parasite infection due to favorable climatic conditions and transmission of parasite eggs in air (severe tropical wind) in the north of the province and adequate humidity in south of the province. The purpose of this study is sero-epidemiologic and parasitological assessment of T. canis infection in children and dogs in Zabol and Chabahar provinces.

Material and methods: This study was a descriptive-analytic study with a simple random sampling of children under 14 years old, referring to urban, rural, and tribal laboratories of Zabol and Chabahar. Demographic data, clinical, and laboratory conditions of patients were collected through interviews, questionnaires, and blood count measuring. The prevalence of IgG antibodies against T. canis was assessed by ELISA. T. canis eggs in dogs (as the original host) were also assessed by examining animal feces. Then the data was analyzed using SPSS19 software and descriptive statistics, chi-square and ANOVA statistical tests

Results: A total of 364 patients were enrolled 51.6% of which were female and mean (Standard deviation) age of participants was 7.2 (±3.7) years. IgG antibodies against T.canis was observed in 3.8% of cases (14 patients). A significant association was found between the seroprevalence of T.canis and eosinophil (p=0.003) and red blood cell count (p=0.04). We also found a significant association between serological prevalence of T.canis and demographic parameters, such as city of residence (p=0.003), gender (p=0.04), consumption of vegetables (p=0.01), and the living place (p=0.04). Mean antibody titration was 2.2 ±1.1, with statistically significant difference among age groups (p=0.001). In addition, T. canis infection was positive in 27.5% of dogs living in the study areas.

Conclusion: The prevalence of T. canis infection in the study population represents a high risk of infection in patients referring to laboratories of Zabol and Chabahar. In addition, given the fact that dogs are the final hosts to transfer Toxocara infection to humans, this study emphasizes the need to control the population of stray dogs in the region to prevent the development of disease in the human society.

Keywords: Toxocara canis, Sero-epidemiology, dogs, children, Zabol, Chabahar

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-112

The effect of nano silver colloid on tachyzoit of Toxoplasma gondii, RH strain

Nima firouzeh[1], saede shohae[2], mahbube salimi[3], hoseyn keshavarz[4], sanaz jafafrpur azami[5]

1-Department of Medical Parasitology and Mycology, Tehran University of Medical Science

2-Department of Medical Parasitology and Mycology, Tehran University of Medical Science

3-Department of Medical Parasitology and Mycology, Tehran University of Medical Science

4-Department of Medical Parasitology and Mycology, Tehran University of Medical Science

5-Department of Medical Parasitology and Mycology, Tehran University of Medical Science

* Corresponding author**:** Nima Firouzeh

Department of Medical Parasitology and Mycology, Tehran University of Medical Science. **Email:** nimafirouzeh4@gmail.com

Abstract

Background: Toxoplasma gondii, the obligate intracellular protozoan parasite is distributed worldwide. The infection has severe sequel in immunocopromised patients and in congenital forms. This study was designed to determine the cytotoxic effect of different concentrations of nanosilver colloid on tachyzoites of T.gondii, RH strain

Methods : Toxoplasma gondii tachyzoite were incubated with 5ppm,10 ppm and 20 ppm of nanosilver colloid (22 nm) as test and with distilled water as control for 30, 60 , 120 min. Then the activity and mortality rate of tachyzoites were monitored by using methylene blue dye. MTT assay were performed with the same concentrations and incubation times as well

Results: The results showed that the cytotoxic effect of nanosilver was higher in the concentration of 20 ppm in both methylen blue dye and MTT methods.

Conclusion: The results of this experiment indicate that nanosilver is an effective factor against Toxoplasma gondii tachyzoite

Keywords: Nanosilver, Toxoplasma , MTT

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-113

Prevalence of Entamoeba sp. complex in patients referred to Tehran hospitals, Iran

Ahmad Reza Meamar[1], Elham Razmjou[2], Hormozd Oormazdi[3]

1-Department of Parasitology and Mycology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

2-Department of Parasitology and Mycology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

3-Department of Parasitology and Mycology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

* Corresponding author**:** Ahmad reza Meamar

Department of Parasitology and Mycology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran
Email: ameamar@yahoo.com

Abstract

Background: Amebiasis is one of the most common causes of morbidity and mortality among parasitic diseases in the world. According to the World Health Organization (WHO) this parasite is responsible for almost 50 million infection and 100 thousand deaths yearly. The aim of this study was to determine the prevalence of three species of Entamoeba histolytica, Entamoeba dispar and Entamoeba moshkovskii in Tehran hospitals.

Material and methods: Fecal samples were collected from patients with gastrointestinal disorders and transferred to the research laboratory of Parasitology Department, School of Medicne, Iran University of Medical Sciences. All samples were investigated by direct examination, culture methods and PCR Single-round to identify the Entamoeba species complex.

Results: A total of 144 fecal samples were collected which 82 (57%) were male and 62 (43%) were female. The prevalence of Entamoeba sp. complex was 9% (13/144), 9% (13/144) and 38.9% (56/144) by direct, culture and single-round PCR methods, respectively. Entamoeba histolytica was found in 5 (3.5%), E. dispar in 22 (15.3%) and E. moshkovskii in 29 (20.1%) of patients. Among them, mixed infection of E. histolytica, E. dispar and E. moshkovskii was identified in 1 (0.7%), E. histolytica and E. dispar in 2 (1.4%) and E. dispar and E. moshkovskii in 8 (5.6%) patients.

Conclusion: The PCR Single-round molecular method could distinguish Entamoeba complex from each other properly. Although the prevalence of E. histolytica and E. dispar was similar to other reports in Iran, the prevalence of E. moshkovskii was higher. It was believe that E. moshkovskii is the cause of gastrointestinal disorders.

Keywords: Prevalence, Entamoeba complex, Entamoeba histolytica, Entamoeba dispar and Entamoeba moshkovskii, Single-Round PCR.

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-114

The Study of trichomonas vaginalis in Referal patinets to gynocologic clinic In kowsar hos.of Qazvin city.

Mhtra Raji[1], DR.s.ali reza mojabi[2], S.hosein mojabi[3], mehdi fattahy[4], ryam azimi[5], Leyla mehdizade[6], mahnaz safavie[7], zohreh tahery[8], roghie saboury[9], Fereshteh khoshkam[10]

1-central health shahid bolandian-qazvin

2-T.U.M.S,

3-central healthy shahid bolandian Qazvin city

4-central healthy shahid bolandian Qazvin city

5-central healthy shahid bolandian Qazvin city

6-central healthy shahid bolandian Qazvin city

7-central healthy shahid bolandian Qazvin city

8-central healthy shahid bolandian Qazvin city

9-central healthy shahid bolandian Qazvin city

10-central healthy shahid bolandian Qazvin city

* Corresponding author**:** Mhtra Raji

central health shahid bolandian-qazvin. **Email:** mitrarajidargah@yahoo.com

Abstract

Background: Introduction &objectives: Trichomonas vaginalis one of the important sexual Diseases. The most of causes vulvovaginitis is due to trichomona after than Bacterial vaginitis and candidia. The symptoms of disease is lochiorrhea with pain and Burning, Itching Irritation vaginalis , and also PH of vaginal is Alkaline Although occasionally the form of trophozoite thricomonas is recognized with study of Microscopic of urine . The aim of this study know incidence vaginals on Patient that refer to one of the clinic gynocologic Qazvin with abnormal Discharge and itching vaginal

Material and methods: In this Research prospective of cross sectional that have refered 145 of patient finding in our archive is down vagina.

Results: Results of this study %.5of sample to be reach the laboratory positive for trichomonaslis. of Venereal Diseases.

Conclusion: therefore in cure oease most be considered trichomonas vaginalis. Specially education healty.

Keywords: Key word: trichomonas- vulvovaginitis

PP-115

Survey of Cryptosporidiosis disease in calf of piranshahr province

Ahmad Jafari[1], Dr ahmad jafari [2], Dr sohrab rasouli [3]

1-275433650

2-Department of Pathobiology, Faculty of Veterinary Medicine, Islamic Azad University, Urmia Branch

3-Department of Pathobiology, Faculty of Veterinary Medicine, Islamic Azad University, Urmia Branch

* Corresponding author**:** Ahmad Jafari

Email: aminkhodadadi@ymail.com

Abstract

Background: Cryptosporidiosis is a common infectious disease among humans and livestock is a global outbreak And seems to be a particularly important economic and public health are diseases that cause severe gastroenteritis and long, and sometimes even fatal respiratory illness in children and people with immune deficiency and AIDS patients is By deep lesionson various parts of the building into the gastrointestinal tract can produce mild to severe diarrhea and even death are. The protozoa in humans and animals and aquatic xerophilous can continue its life cycle in the host body and is not impaired in healthy hosts.

Material and methods: The area of research in this investigation was villages around Piranshahr county, west Azerbaijan province. In total, the stool samples of 240 calves from the age of 30 days to 5 years, of both sexes male and female, will be examined on the presence of Cryptosporidium parasite. The number of samples is based on the level of certainty (α=0.05) 95 % and the discrimination of at least a sample of population is considered to be 5 % in the hypothetical spread of infection on accidental sampler was performed between the intervals of April 2015 and November 2015. After the specification of the owner and animal husbandry were recorded, they were sent to parasitology laboratory of Islamic Azad University of Urmia branch. An additional information such as sex, age, number of sample, stool consistency (natural, soft, very soft, diarrheic) and also any kind of abnormally in stool (such as streaks of blood, fat and mucus) was being recorded on a paper stool samples with the use of modified Ziehl neelsen staining method, were stained and the color images with magnifications of 40X &100X were seen in five scopes.

Results : In the study of the prevalence of cryptosporidiosis illness in the milking cows of rural country of Piranshahr , most of with were native breeds in the forms of traditional farms or half- industrial, about 17 calves were infected with Cryptosporidium sp. Parasite. From 17 calves, were female 14 (5/83 %) and the rest were male 2 (1.25 %). Also among the positive samples of 17 calves 15 of them were over a one year (6.25 %) and 2 of them were under one year (0.83 %).

Conclusion : among the ill cows of under a year no clinical symptoms of diarrhea, dihydratacion, decrease in apatite and in action were found but in some of positive samples of over a year, symptoms such as diarrhea, decrease in apatite and dihydratacion, were recorded on the page of record.

Keywords: dihydratacion, protozoa, Cryptosporidiosis

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-116

Comparison of three methods for Diagnosis of Coetaneos Leishmaniasis: Direct smear, Iproved Microculture and PCR

abdol sattar pagheh[1], Mahdi Fakhar[2], Fatemeh Mesgarian[3], Vahid Danesh[4], Aynaz Ghojoghi[5]

1-Student Research Committee, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

2-Molecular and Cell Biology Research Center, Mazandaran University of Medical Sciences, Sari, Iran

3-Gonbad Health Center Lab, Gorgan University of Medical Sciences

4-Molecular and Cell Biology Research Center, Mazandaran University of Medical Sciences, Sari, Iran

5-Toxoplasmosis Research Center, , Mazandaran University of Medical Sciences, Sari, Iran

* Corresponding author**:** Abdol sattar Pagheh

Student Research Committee, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran. **Email:** satar2011@gmail.com

Abstract

Background: Leishmaniasis is a vector- born parasitic disease caused by a protozoan, Leishmania spp. The routine diagnosis of cutaneous leishmaniasis (CL) patients depends on examination of skin lesions using smears. Microscopic examination usually has low sensitivity and cannot identify even some confirmed CL cases. The aim of this study was Comparison of three methods for Diagnosis of Coetaneos Leishmaniasis among suspected CL cases.

Material and methods: This study was carried out in during 2013-2015. Among patients with suspicious skin lesions to CL referred to health center laboratories of Gonbad-e-Qabus and Torbat-e-Jam districts. Skin scraping smear, improved microculture (IMC) and polymerase chain reaction (PCR) were performed.

Results: The positive rates from a total of 138 subjects were 73.9% (n=102), 90.5% (n=125) and 93.4% (n=129) by Skin scraping smear, microculture methods and PCR respectively. The highest degree of agreement was found between PCR and IMC (Kappa= 0.82, agreement=0.96%). Moreover, among the DNA extracted from smears, L. tropica and L.major were identified on the smears.

Conclusion: This study revealed PCR and microculture techniques are along with the advantages of early diagnosis of CL cases. Also, we suggest the IMC as a valuable alternative diagnostic method for PCR in diagnosis of CL particularly in endemic regions.

Keywords: Cutaneous leishmaniasis, Direct smear, PCR, Microculture

PP-117

Emerging intestinal Microsporidia infection in general population in Jiroft district from southeastern Iran: A cross-sectional study during 2013-2014

Massomeh Ghaderipour[1], Masoomeh Ghaderipour[2], Mostafa Rezaeian[3], Mehdi Mohebali[4], Saeedeh shojaee[5], Khadijeh Khanaliha[6], Maryam Barkhori[7], Hamed Mirjalali[8]

1-*Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran

2-*Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran

3-Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran, Centers for Research of Endemic Parasites of Iran (CREPI), Tehran University of Medical Sciences, Tehran, Iran

4-Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran,Centers for Research of Endemic Parasites of Iran (CREPI), Tehran University of Medical Sciences, Tehran, Iran

5-Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran

6-Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran

7-Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran

8-Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran

* Corresponding author**:** Massomeh Ghaderipour

Department of Medical Parasitology, School of Public Health, Tehran University of Medical Science, Tehran,Iran. **Email:** m.ghaderipour@gmail.com

Abstract

Background: Microsporidia have been reported as the cause of opportunistic infections in immunocompromised patients in Iran and other countries. There was no data about prevalence of intestinal microsporidia in healthy people population or people with unknown immunity in Iran. This study aimed to provide preliminary data on the present status of microsporidia infection in the local healthy population in Jiroft, Kerman province from southeastern Iran during 2013-2014.

Material and methods: Altogether, fresh stool samples were randomly collected from 418 individuals resident in rural 209(50%) and urban 209(50%) areas of Jiroft district. All of the collected samples concentrated with conventional formalin-ether, stained with Ryan blue and then microscopic examination with high magnification was performed on each sample separately for the demonstration of microsporidial spores.

Results: Microsporidial spores Identified in 41 out of 418 (9.8%) samples including 16/41(39%) from rural areas and 25/41(61%) from urban areas. In general, there was no significant difference between sex, age, job, education and contact with soil and livestock, water supply, gastrointestinal disorders and microsporidial infection

Conclusion: Intestinal microsporidial infection without clinical manifestations is prevalent in general population resident in southeastern Iran. Appropriate molecular methods are needed for microsporidia species identification.

Keywords: Intestinal microsporidial infection, General population, Human, Iran

هشتمین کنگره بین المللی و اولین کنگره ملی علوم پایه پزشکی
آزمایشگاه و بالین و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-118

Isolation and molecular characterization of Acanthamoeba genotypes isolated from public and recreational areas in East Azarbaijan, Iran

Seyed Ahmad Karamati[1], Maryam Niyyati[2], Samira Dodangeh[3], Zohreh Lasjerdi [4]

1-Department of Medical Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

2-Department of Medical Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

3-Department of Medical Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

4-Department of Medical Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author**:** Seyed ahmad Karamati

Department of Medical Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. **Email:** sa.karamati@yahoo.com

Abstract

Background: Pathogenic strains of Acanthamoeba are causative agents of a sight threating infection of the cornea known as Acanthamoeba keratitis (AK). AK cases have been raised in Iran during past years due to inappropriate usage of contact lens and most patients report a contact with contaminated sources such as dust, water or soil.

Material and methods: To this end, 60 soil samples were collected from public and recreational areas in the province of East Azerbaijan, Iran and checked for the presence of Acanthamoeba spp. Samples were cultured on non-nutrient agar plates seeded with heat killed Escherichia coli. PCR and sequencing of the DF3 region were carried out in order to genotype the isolated strains of Acanthamoeba. Thermotolerance and osmotolerance assays were performed in order to investigate the pathogenic potential of isolated Acanthamoeba strains.

Results: Acanthamoeba spp. was isolated from 41.6 % of soil samples and genotyping of the strains resulted in the identification of genotypes T3, T4, T5 and T11. Most of the isolates belonging to genotypes T3 and T4 showed high pathogenic potential, indicating that they might present a potential health hazard for humans and other animals in this region. Moreover, to the best of our knowledge this is the first report on the identification of genotypes T3 and T11 from soil sources in the country.

Conclusion : Overall, high percentage of free living amoeba including Acanthamoeba spp. in soil and other environmental samples is a hygienic risk for public health mainly for individuals with immune deficiency and contact lens wearers. Therefore health experts must be conscious of FLA presence in such environments. Our results are a step toward considering contaminated sources as a leading risk factor for soil-borne diseases which reflect a potential hazard to human health.

Keywords: Acanthamoeba spp, Iran, soil

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-119

Prevalence of Demodex Mites in Different Occupation Groups, Tehran, Iran

Hamidreza Shokrani[1], Maryam Hoseini-Alhashemi[2], Maryam Jazini-Dorche[3]

1-Department of Parasitology, Faculty of Veterinary Medicine, Lorestan University

2-Department of Parasitology, Faculty of Specialized Veterinary Sciences, Science and Research Branch, Islamic Azad University, Tehran.

3-Department of Parasitology, Faculty of Specialized Veterinary Sciences, Science and Research Branch, Islamic Azad University, Tehran.

* Corresponding author**:** Hamidreza Shokrani

Department of Parasitology, Faculty of Veterinary Medicine, Lorestan University. **Email:** hamidreza_shokrani@yahoo.com

Abstract

Background: Demodex mites are cigar-shaped ectoparasites that can infest the sebaceous glands and hair follicles from almost every area of human skin especially on the facial area. Two species have been found on human skin including Demodex folliculorum and Demodex brevis. These species are 0.3 to 0.4mm in length and are the most common permanent parasites found in normal human skin. Demodex infestation can cause some symptoms such as dramatic facial and eyelid inflammation especially in people with weakened immune system.

Material and methods: In this study we examined 160 healthy adults from three different occupation groups in Tehran, including college students, administrative employees and farm workers, to determine the prevalence of Demodex infection. The individuals were between the ages of 14 and 70 Including 51.25% men and 48.75% women. Samples were obtained from nasolabial fold and wings of the nose using the squeezing method. In this method the wings of the nose were squeezed with thumb to get some sebum. The sebum were placed on the slides accompanied by a drop of liquid paraffin and were examined under an optical microscope at a magnification of 10X.

Results: The results showed that the overall prevalence of Demodex infestation was 17.5% with mean age of 42 years. Demodex infestation was found to occur more frequently in males (28.04%). The infestation was found in all occupation groups. The highest prevalence was seen among employees. The prevalence of Demodex mites between different groups was: 16.27% for college students, 23.4% for administrative employees and 14.28% for farm workers.

Conclusion: The role of Demodex mites in human skin diseases is under investigation. The prevalence increases with age and also could be associated with sex. The squeezing method is an easy, rapid and reliable method for studies of Demodex prevalence.

Keywords: Demodex mite; Sebaceous glands; Squeezing method

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-120

Study on the Prevalence of intestinal parasite infection in human referred to laboratory of Azarshahr,Iran ,Health Center Laboratory , since April – july 2014 – 2015

Mehdi Hasanzadeh[1], mahdi hasanzadeh[2], ziba zali baglu[3], farshad aryadust[4], babak peygami[5], reza bageri[6], zeynab allahverdian[7], ahad shahnami[8], ali mohammadi[9], rogayyeh keramati[10]

1-Chancellor for health -Tabriz medical university

2-Chancellor of Health – Tabriz medical university

3-Chancellor of Health – Tabriz medical university

4-Chancellor of Health – Tabriz medical university

* Corresponding author**:** Mehdi Hasanzadeh

Chancellor for health -Tabriz medical university. **Email:** zalibaglu@gmail.com

Abstract

Background: Parasite disease is the most important cause of debilitating ill as epidemic and endemic in all over the world especially among children and adult. As that parasite disturbed the absorption of vitamin and other important material in severe infection. Cyst of that parasite resistant to unstable environmental condition and also some of the that parasite have high resistant to cold.

Material and methods: This study was done between different age group referred to laboratory of Tabriz health center laboratory. Due to the facility and equipment of this center direct examination of smears normal saline and iodine soluble for detection of this parasite was done.

Results: Eventually 22265 samples which sent to this center from April – july 2014 – 2015, 19 month. demonstrate in table : Number Name of Parasite Rate of disease Unit 1 Entamoeba coli 0/13 Percent 2 Jiardialamblia 0/23 Percent 3 iodamoebabuetschlii 0/02 Percent 4 blastocystishominis 0/47 Percent 5 enterobiusvermicularis Egg 0/10 Percent 6 entamoebahistolytica / Dispar 0/17 Percent Most of reported in this study blastocystishominis 0/47 % and lower reported for iodamoebabuetschlii with 0/02 % .

Conclusion: Prevalence frequency of intestinal parasite between different age group demonstrate to most important transmit this parasites. Education, detection and health regard helped to prevention this parasite among that group.

Keywords: azarshahr-parasite

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-121

Study on the Prevalence of intestinal parasite infection in human referred to laboratory of marand, Iran, Health Center Laboratory, since April – July 2014 – 2015

Reza Bagheri[1], reza bageri[2], ziba zali baglu[3], lida gorbani[4], ahad zarei[5], zeynab allahverdian[6], yahya yahyavi[7], ahad shahnami[8], Mahdi hasanzadeh[9]

1-Chancellor for health -Tabriz medical university

2-Chancellor of Health – Tabriz medical university

3-Chancellor of Health – Tabriz medical university

4-Chancellor of Health – Tabriz medical university

5-Chancellor of Health – Tabriz medical university

* Corresponding author**:** Reza Bagheri

Chancellor for health -Tabriz medical university. **Email:** rar.bagheri@yahoo.com

Abstract

Background: Parasite disease is the most important cause of debilitating ill as epidemic and endemic in all over the world especially among children and adult. As that parasite disturbed the absorption of vitamin and other important material in severe infection. Cyst of that parasite resistant to unstable environmental condition and also some of the that parasite have high resistant to cold.

Material and methods: This study was done between different age group referred to laboratory of Tabriz health center laboratory . Due to the facility and equipment of this center direct examination of smears normal saline and iodine soluble for detection of this parasite was done.

Results: Eventually 11730 samples which sent to this center from April – july 2014 – 2015, 19 month . demonstrate in table : Number Name of Parasite Rate of disease Unit 1 Entamoeba coli 0/10 Percent 2 Jiardialamblia 0/42 Percent 3 chilomastixmesnili 0/02 Percent 4 enterobiusvermicularis Egg 0/8 Percent 5 entamoebahistolytica / Dispar 0/17 Percent Most of reported in this study Jiardialamblia 0/42 % and lower reported for chilomastixmesnili with 0/02 % .

Conclusion: Prevalence frequency of intestinal parasite between different age group demonstrate to most important transmit this parasites. Education , detection and health regard helped to prevention this parasite among that group.

Keywords: marand-parasite-Jiardialamblia-chilomastixmesnili

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-122

Study on the Prevalence of intestinal parasite infection in human referred to laboratory of ajabshir, Iran, Health Center Laboratory, since April – July 2014 – 2015

Ahad shahnami[1], farshad aryadust[2], Ali mohammadi[3]

1-Chancellor of Health – Tabriz medical university

2-Chancellor of Health – Tabriz medical university

3-Chancellor of Health – Tabriz medical university

* Corresponding author**:** Ahad Shahnami

Chancellor of Health – Tabriz medical university. **Email:** ahadshahnami@gmail.com

Abstract

Background: Parasite disease is the most important cause of debilitating ill as epidemic and endemic in all over the world especially among children and adult. As that parasite disturbed the absorption of vitamin and other important material in severe infection. Cyst of that parasite resistant to unstable environmental condition and also some of the that parasite have high resistant to cold.

Material and methods: This study was done between different age group referred to laboratory of Tabriz health center laboratory. Due to the facility and equipment of this center direct examination of smears normal saline and iodine soluble for detection of this parasite was done.

Results: Eventually 7187 samples which sent to this center from April – July 2014 – 2015, 19 month . demonstrate in table : Number Name of Parasite Rate of disease Unit 1 Entamoeba coli 0/26 Percent 2 Jiardialamblia 0/09 Percent 3 Edolimax nana

0/02 Percent 4 enterobiusvermicularis Egg 0/10 Percent 5 entamoebahistolytica / Dispar 0/04 Percent Most of reported in this study Entamoeba coli 0/26 % and lower reported for Edolimax nana with 0/02 % .

Conclusion: Prevalence frequency of intestinal parasite between different age group demonstrate to most important transmit this parasites. Education , detection and health regard helped to prevention this Prevalence frequency of intestinal parasite between different age group demonstrate to most important transmit this parasites. Education , detection and health regard helped to prevention this parasite among that group. among that group.

Keywords: parasite-Entamoeba coli-enterobiusvermicularis Egg-ajabshir

PP-123

Prevalence of intestinal parasites infection in patient referred to laboratory of Kaleibar ,Iran ,Health Center Laboratory , since April 2014 – November 2015

Mahdi Parsaei[1], Sedigeh Sarafraz[2], Dr Abbas shahbazi[3], Dr Ali mohamadi[4], Dr Ahmad Mardi[5], Dr Alireza Hasanzadeh[6], Dr mahmood Mahami[7], Dr Adel spotin[8], Yaghub Azadi[9]

1-Chancellor for health - Tabriz medical university - Department parasitology and mycology faculty of medicine ,Tabriz medical university

2-Department parasitology and mycology faculty of medicine ,Tabriz medical university

3-Department parasitology and mycology faculty of medicine ,Tabriz medical university

4-Chancellor for health - Tabriz medical university

5-Chancellor for health - Tabriz medical university

6-Chancellor for health - Tabriz medical university

7-Department parasitology and mycology faculty of medicine ,Tabriz medical university

8-Department parasitology and mycology faculty of medicine ,Tabriz medical university

9-Department parasitology and mycology faculty of medicine ,Tabriz medical university

* Corresponding author**:** Mahdi Parsaei

Chancellor for health - Tabriz medical university - Department parasitology and mycology faculty of medicine, Tabriz medical university. **Email:** parsaeim@tbzmed.ac.ir

Background: Parasites is the most important cause of debilitating disease as epidemic and endemic in all over the world especially among children and adult . As that parasites disturbed the absorption of vitamin , minerals and other important material in severe infection . Cyst of that parasite resistant to unstable environmental condition and also some of the that parasites have high resistant to cold and chlorine water .

Material and methods: This study was done between different age group referred to laboratory of Kaleybar health center laboratory. Equipment and facilitate of this center, direct examination of smears preparation with normal saline and iodine soluble for detection parasites was done.

Results : Eventually 2036 samples which sent to this center from April 2014 until November 2015 , 21 months , demonstrated in down table : Nomber Name of Parasite Rate of disease Unit 1 Entamoeba coli 0/64 Percent 2 Thrichomonas hominis 0/14 Percent 3 Edolimax nana 0/57 Percent 4 Jiardia lamblia 1/09 Percent 5 iodamoeba buetschlii 0/38 Percent 6 chilomastix mesnili 0/13 Percent 7 blastocystis hominis 0/78 Percent 8 enterobius vermicularis Egg 0/45 Percent 9 entamoeba histolytica / Dispar 0/63 Percent 10 strongyloides stercoralis 1 Sample In this study most of parasite Jiardia lamblia 1/09 % and lower chilomastix mesinili 0/13 % reported , also one sample male and female for strongyloides stercoralis repoted .

Conclusion: Prevalence and frequency of intestinal parasite between different age group demonstrate emphasis transmission this parasites and reduced energy among active population in the different social . Education , detection , wash the hands and better health regard, it will be important to prevention intestinal parasite among different age group .

Keywords: Kaleybar , intestinal parasites - Direct examination

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-124

A study on seroprevalence of anti toxocariasis antibody (IgG) among farms workers in Shahre-kord & investigation of farms soil specimens for Toxocara egg

Bahman Khalili[1], Abbas Razavi[2], Simin Taghipour[3]

1-Associate prof. Department of Parasitology, Faculty of Medicine, Shahre-kord, Iran

2-MSc of Parasitology, Department of Parasitology, Faculty of Medicine, Shahre-kord, Iran

3-Ph D student of Mycology, Ahvaz University of Medicine, Department of Mycology, Ahvaz, Iran

* Corresponding author**:** Abbas Razavi

Associate prof. Department of Parasitology, Faculty of Medicine, Shahre-kord, Iran. **Email:** abbasrazavi58@yahoo.com

Abstract

Background: Toxocariasis is one of the most common zoonotic parasitic diseases with worldwide distribution, caused by Toxocara canis and Toxocara cati. Toxocara canis is the most common intestinal nematode of dogs and etiologic agent of visceral larva migrant syndrome. Whereas Shahre-kord is located on husbandry area and there are no studies on husbandry jobs and soil of farms, this study aimed to investigate farms soil for Toxocara eggs and also to find seroprevalence of anti-Toxocara antibody in farm workers in Shahre-kord by using ELISA method.

Material and methods: In this study 203 blood samples as test and 120 blood samples as control were prepared. Also 150 samples of soil from livestock were obtained .The presence of anti-Toxocara antibody (IgG) was tested using ELISA method. The presence of Toxocara canis egg in soil specimens were investigated by flotation method using sodium nitrate. Processing and data analysis using SPSS Version 16 software were used.

Results : : the study showed that out of 150 soil specimens 9 soil specimens Toxocara canis egg was detected. In cases group 6 cases (3%) were positive for anti Toxocara-canis antibody. serum but in control group 2 cases (1/7%) anti-Toxocara antibody were found. the study showed that out of 150 soil specimens 9 soil specimens Toxocara canis egg was detected. In cases group 6 cases (3%) were positive for anti Toxocara-canis antibody. serum but in control group 2 cases (1/7%) anti-Toxocara antibody were found.

Conclusion: The results of the study showed that soil specimens of these farms are infected with Toxocara eggs. These findings will increase the programs information and livestock control plans against Toxocariasis.

Keywords: Toxocariasis, Seroprevalence, ELISA

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-125

Species composition and Plasmodium screening of mosquitoes collected from Chabahar County, Sistan & Baluchistan province, Iran

Helen Hoosh deghati[1], Helen Hoosh-Deghati[2], Navid Dinparast Djadid[3], Vahideh Moin-Vaziri[4], Seyyed Javad-Seyyed Tabaei[5], Abbas Ali Raz[6], Naseh Maleki-Ravasan[7]

1-Department of Parasitology, School of medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

2-Department of Parasitology, school of medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

3-Malaria and Vector Research Group (MVRG), Biotechnology Research Center (BRC),Pasteur Institute of Iran(PII), Tehran, Iran

4-Department of Parasitology, school of medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

5-Department of Parasitology, school of medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

6-Malaria and Vector Research Group (MVRG), Biotechnology Research Center (BRC),Pasteur Institute of Iran(PII), Tehran, Iran

7-Malaria and Vector Research Group (MVRG), Biotechnology Research Center (BRC),Pasteur Institute of Iran(PII), Tehran, Iran

Corresponding author**:** Helen Hoosh deghati

Department of Parasitology, School of medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. **Email:** helen_hooshi@yahoo.com

Abstract

Background: Malaria is widespread in the tropical and subtropical regions of the world, also is one of the public health problems in Iran. Based on WHO report, Iran is classified in the malaria elimination phase. The most problematic areas of the country is southeast, which highly affected by neighboring countries such as Afghanistan & Pakistan. As being in eradication phase in Iran, it is too important to have enough knowledge about vectors. Vector incrimination is the first step for providing any control guidelines. This study aimed to investigate Plasmodium infection in Anopheles species collected from Chabahar County (Iran) by molecular tools.

Methods: Anopheles spp were collected through WHO/EMRO coordination from Chabahar County (Iran) and were kept in Pasteur Institute of Iran. At first, the specimens were identified at species level based on morphological characters by using a newly developed key to Iranian, Afghani and Pakistani Anopheles species in MVRG, PII. Then, DNA was extracted from each specimen by using MBST DNA Kit. A set of specific primers used to detect Plasmodium spp infection by Nested-PCR method.

Results: Morphological identification of 400 female mosquitoes revealed the presence of 4 species: An. stephensi 379(94.75%) as most prevalent species, An. fluviatilis 11(2.75%), An. culicifacies 6(1.5%) and An. sergenti 4(1%). Pasmodium infection of all specimens was done by Nested-PCR and did not reveal any products.

Conclusion: Based on the out coming results, four different species were identified among samples, with no infection to malaria parasite. Most prevalent species was An. stephensi, which is known as main vector of malaria in south and southeast of Iran. Moreover, except An. sergenti others species also have important role in malaria transmission. Being in elimination phase, interventions should focus on detecting all malaria cases, managing malaria foci, managing imported malaria cases and preventing onward transmission, which demands for continued monitoring of vectors.

Keywords: Anopheles spp, Plasmodium spp, Morphological identification, Nested-PCR, Chabahar, Iran

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-126

Giardia lamblia and Entamoeba histolytica Infections among Patients Referred to Enghelab laboratory, Khorramabad, Iran

Hamidreza Shokrani[1], Farnaz Ferdosi[2], Zahra Jafari[3], Mohamad Soltani[4]

1-Department of Parasitology, Faculty of Veterinary Medicine, Lorestan University, Khorramabad, Iran.

2-Student of MSc, Faculty of Veterinary Medicine, Lorestan University, Khorramabad, Iran.

3-Student of MSc, Faculty of Veterinary Medicine, Lorestan University, Khorramabad, Iran.

4-Manager at Enghelab Medical Laboratory, Khorramabad, Iran.

Corresponding author**:** Hamidreza Shokrani

Department of Parasitology, Faculty of Veterinary Medicine, Lorestan University, Khorramabad, Iran. **Email:** hamidreza_shokrani@yahoo.com

Abstract

Background: Giardia lamblia and Entamoeba histolytica are the most important non-viral infections causing diarrheal illness in humans. The aim of this epidemiological study was to determine the prevalence of G. lamblia and E. histolytica, in patients referred to Enghelab laboratory in Khorramabad, Iran.

Material and methods: This study was carried out from August 2015 to January 2016 on all patients referred to parasitology sections of Enghelab laboratory in Khorramabad. Stool samples of patients were examined by direct smear and Formalin-Ether concentration methods. Demographic data such as age, sex and the consistency and the color of samples were recorded.

Results: Totally 770 persons (51.8% male and 48.2% female) were examined which among these 28 persons (3.6%) were infected. Only one species was seen in all stool samples. Infection rates to G. lamblia and E. histolytica were 1.4% and 2.2%, respectively. The prevalence of intestinal protozoan parasites in male (5%) was significantly higher than female (2.1%). Results showed that the highest prevalence rate was in the ≤1 year age group (7.5%).

Conclusion: Intestinal protozoal infections have been noticeably decreased during recent years which may be due to improvement in public health sanitation. A larger scale study is needed for accurate estimates of prevalence of intestinal protozoan parasites and more effort should be done to control protozoan infection.

Keywords: intestinal protozoan parasite, Giardia lamblia, Entamoeba histolytica, Khorramabad

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-127

The Molecular Method in Diagnosis of Ocular Toxoplasmosis in Tehran

Houman Hanifehpour[1], Vafa Saber[2], samsam shariat[3], hooman hanifehpour[4]

1-student of Shahrekord University of medical science

2-Beheshti University of Medical Science

3-shahr-e-kordUniversity of Medical Science

4-Section of Biological Control and Laboratory in Food and Drug Administration

Corresponding author**:** Vafa Saber

student of shahrekord university of medical science. **Email:** hoomanhanifehpour@yahoo.com

Abstract

Background: Toxoplasmosis is one of the most prevalent parasitic infections common between human and animals. The disease can be either acquired or congenital. Toxoplasma gondii (T. gondii) is considered as an opportunistic and dangerous infection in Immunusuppressed individuals or pregnant women. The parasite reaches to the eye and its retina through circulation and causes irrecoverable chorioretinitis. Attack to the eyes is chronic and sometimes infection relapses and the damaged retina and choroid would not repair. The posterior pole scares can persist a serious threat for the vision. Other symptoms of the disease consists of blurred vision, photophobia, vitreous inflammation, active and passive scares, and clinical signs. Molecular methods are carrying out complementary for recognition of acquired or congenital infections. The aim of the current study is to evaluate efficiency (sensitivity and characteristic) of molecular method in isolation of T. gondii in ocular infections patients with healthy immune systems.

Material and methods: Blood sampling had done from major ophthalmology centers in Tehran (Farabi, Labbafinejad and Imam Hossein Hospitals). The clinical symptoms were examined and recognized. For examining possible relapse re-sampling was done in 15 and 30 days. Thereafter, the buffy coat of the samples was employed for DNA extraction using DNG kit. For performing the polymerase chain reaction (PCR), primer of the gene B1was applied.

Results: Following the PCR, from the 71 blood samples, 34 patients (47%) had positive form of the disease. However, with evaluating the first relapse, two weeks after the first step of the disease, among the 41 patients, 29 (70%) had positive reaction of the disease. These patients even showed positive PCR in the first step. In the third sampling step (30 days later), 19 patients were examined and 9 (47%) had positive reaction. In other words, in the second and the third steps there were no obvious incidents.

Conclusion: According to the clinical diagnosis, ophthalmoscope observation and evaluation of active and passive scares as well as clinical symptoms, complementary, and PCR methods are of great importance in the two clinical diagnosis of the disease.The diagnosis of T. gondii, often relays on clinical tests. Nevertheless, unusual clinical symptoms or differentiation of the disease from other alternative symptoms make the diagnosis problematic. However, sensitivity and characteristic of molecular PCR is of great interest. To conclude, for definite and final ocular toxoplasmosis diagnosis, clinical and complementary methods such as PCR can be employed.

Keywords: Ocular Toxoplasmosis-PCR-Toxoplasma gondii

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-128

Molecular carectization of Naegleria spp. from Hotspring sources in Mazandran Province, North of Iran

Alireza latifi[1], maryam niyyati[2], ali haghighi[3], Javad Seyed Tabaei[4], Zohreh Lasjerdi[5]

1-Dep. Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

2-Dep. Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

3-Dep. Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

4-Dep. Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

5-Dep. Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* Corresponding author**:** Alireza Latifi

Dep. Parasitology and Mycology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. **Email:** arlatifi_musician@yahoo.com

Abstract

Background: Neagleria spp. could lead to severe disease such as primary amoebic meningoencephalitis (PAM). Amoebae niches could be in any water sources such as warm freshwater such as lakes, rivers, hot springs and soil. The aim of this study was to determine the presence of Naegleria spp. using morphological and molecular criteria

Material and methods: 22 water samples (250–400 ml) were randomly collected from Hotspring sources of Mazandran Province, North of Iran and stored at 4oC or room temperature until used. Water samples were filtered through a 0.45µm diameter cellulose nitrate filter. The filters were inverted on heat inactivated Escherichia colitreated, 1.5% non-nutrient agar plates. Plates were screened for cysts and trophozoites of Naegleria spp. daily for up to one month. DNA extraction and PCR analysis were done using specific primer pairs. Sequencing was performed for genus identification.

Results: Out of 22 water samples 12 were positive for Vahllkampfiids. according to morphology criteria. Neagleria trophozoites were characterized by a nucleus and a surrounding halo. The cyst form is spherical and about 7-15 µm in

diameter. They are smooth, and have a single layered wall with a single nucleus. According to both morphological criteria and PCR analysis. The presence of Naegleria was confirmed.

Conclusion: Occurrence of potentially pathogenic Naegleria spp. types in hotspring sources is of concern of health authorities. Improved disinfection and filteration of hotspring is important for prevention of diseases.

Keywords: Naegleria spp, Hotspring, Mazandran Province

PP-129

Morphological and molecular characterization of Fasciola hepatica, Fasciola gigantica in Livestock from Ardabil, Iran

Mojgan Aryaiepour[1], Mojgan Aryaeipour[2], Eshrat Beigom Kia[3], Mohammad Bagher Rokni[4], Bahram Kazemi[5], Masuod Behnia[6], Arezoo bozorgomid[7]

1-Department of Medical Parasitology and Mycology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, Tehran, Iran

2-Department of Medical Parasitology and Mycology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, Tehran, Iran

3-Department of Medical Parasitology and Mycology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, Tehran, Iran

4-Department of Medical Parasitology and Mycology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, Tehran, Iran

5-Department of Biotechnology, School of Medicine, Shahid Beheshti University of Medical Science, Tehran, Iran

6-Department of Medical Parasitology and Mycology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, Tehran, Iran

7-Department of Medical Parasitology and Mycology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, Tehran, Iran

* Corresponding author**:** Mojgan Aryaiepour

Department of Medical Parasitology and Mycology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, Tehran, Iran. **Email:** maryaiepour@gmail.com

Background: Fascioliasis is primarily a disease of livestock such as cattle, sheep, and goats and humans are accidental hosts. The specific differentiation can only be made by either a morphological study of adult flukes or by molecular tools. Overlapping makes it difficult to identify the particular species involved in human infections so that it is often referred to as Fasciola sp. The purpose of the present study was to describe morphological and morphometrical characteristics of Fasciola sp in Livestock from Ardabil Province, Northwest Iran.

Material and methods: A total of 40 adult flukes were collected from different definitive hosts (cattle and sheep). The first we identify Fasciola spp. based on morphological and metric assessment of external features of fresh adults, morphological and metric assessment of internal anatomy of stained mounted worms..The mitochondrial Cytochrome oxidase 1(COX1) region was amplified from 8 Fasciola sp. Trematodes by polymerase chain reaction (PCR), and the representative amplicons were cloned and sequenced.

Results: Morphological characterizations are compared to F. hepatica and F. gigantica standard populations, geographical areas where both species do not co-exist. Based on Morphological characterizations, from the total of 40 isolates, 20 isolates were identified as Fasciola hepatica and 20 isolates were identified as Fasciola gigantica. Results based on PCR representative COX1 amplicons and sequence analysis were confirmed by Morphological parameters. No hybrid forms were detected in the present study.

Conclusion: The presently used molecular tool is recommended for further study to help draw a proper map for geographical distribution of Fasciola species. However, the study demonstrated that morphometric indices can also be used for differential diagnosis of the two Fasciola species.

Keywords: Fasciola hepatica, Fasciola gigantica, morphology, Genotype, cox1

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-130

The Effect of artemisinin drugs with glucantim and shark cartilage on promastigotes and amastigotes of Leishmania infantum in in vitro conditions

Soheila molaie[1], ghafarifar F[2], Dalimi A[3], zoheir hasan saraf[4]

1-Tarbiat modarres university,department parasitology,tehran,iran

2-Tarbiat modarres university,department parasitology,tehran,iran

3-Tarbiat modarres university,department parasitology,tehran,iran

4-Tarbiat modarres university,department parasitology,tehran,iran

* Corresponding author**:** Soheila Molaie
Tarbiat modarres university,department parasitology,tehran,iran. **Email:** smolaie83@gmail.com

Abstract

Background: Leishmaniasis is one of the neglected tropical diseases .visceral leishmaniasis is the acute form of the disease and if diagnosis and treatment left, the rate of mortality were high level. Recently the use of derivatives plant instead of chemical drugs are taken into consideration. In this study we examined effects of artemisinin with glucantim and shark cartilage on promastigotes and amastigotes of Leishmania infantum in in-vitro conditions and cell death.

Material and methods : : In this experimental study the effect of Artemisinin,glucantim and shark cartilage was evaluated atconcentration range of (400,200,6.25,12.5,25,50,100)micro grams per ml on the L. infantum promastigotes and concentration range of 25, 50 on macrophages infected with L. infantum after 72hrs by flow cytometry assay.

Results: In this study we used L. infantum strains (MCAN / ES / 98 / LIM 877) . IC50 of drugs artemisinin, glucantim and both were determined after 72 hours respectively 25, 50 micro-grams per mililiter , the number of parasites per ml in the control group was 1.65 × 106,artemisinin at a concentration 25 was.75 × 106 . the number of parasites per ml in the shark cartilage wells was very low as compared with the control group . toxicity and survival of parasites in the promastigote and amastigote for all these drugs was measured by MTT assay results. Flow cytometry analysis showed that the percent cytotoxicity in control was 2.41% (apoptosis .41% and 2% respectively delay apoptosis and necrosis .97%. with concentration levels of 25 artemisinin has cytotoxicity 52% (apoptosis 51 / 50% and delayed apoptosis 1.85%) and necrosis. 24% respectivly.with concentration levels of 50 artemisinin has 53.5% (as 51.74% apoptosis , delay apoptosis 76/1%) and necrosis was.16% respectively. this data for Glucantime with concentration of 400 was13.5%, respectively. With concentration 200,cytotoxicity has 12% . with two drug artemisinin + glucantim combination , concentration of 25 has 59.9%

And the concentrations 50 , cytotoxicity level was 61% respectively. Cytotoxicity of shark cartilage on Promastigotes was 32% (apoptosis 13.2%, delay apoptosis 18.44%) and 10.34% necrosis respectively. Cytotoxicity of this drugs for infected macrophages with concentration 25 and 50 was of 15%, 19% respectively.for combination A + G , with concentration of 50 sytotoxicity rate was 56% and with concentration of 25 was35% respectively.

Conclusion : :This research indicate that artemisinin with glucantim has anti-Leishmania activity and can be used to study in in- vivo as a new drug.this drugs also can induce appoptosis in leishmania infantum paramastigotes and amastigotes.

Keywords:artemisinin,glucantim,shark cartilage,leishmanaia infantum,in vitro

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-131

The effect of Hydro-Alcoholic extract of Peganum Harmala on trophozoites of Acanthamoeba in vitro

Tooran Nayeri chegeni[1], Fatemeh Ghaffarifar [2], Fariba Khoshzaban[3], Abdolhosein Dalimi ASL [4]

1-Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

2-Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

3-Department of Parasitology, Shahed University of Medical Sciences, Tehran, Iran.

4-Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

* Corresponding author**:** Fatemeh Ghaffarifar

Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran. **Email:** tooran.nayeri@modares.ac.ir

Abstract

Background: Acanthamoeba, an opportunistic amoeba that causes acute amebic keratitis. Amoebic keratitis is difficult to treat because cysts are more resistant than trophozoites. Harmel is herbaceous perennial,no fluff plant which can grows to 30-100 cm and throughout the Middle East, North Africa distributed, and Central Asia The aim of the present study was to determine the effects of Hydro-Alcoholic extract of Peganum Harmala on trophozoites of Acanthamoeba in vitro.

Material and methods: In this experimental study, a sample taken from the patient was cultured on 1.5% non-nutritious agar media. DNA extraction and PCR amplification was performed using genus specific primers. Sequencing analysis and BLAST search were conducted for determine the genotypes. The extracts was obtained from herbs, and finally different concentrations10،5،2.5،1.25) mg/ml) of ethanolic extract of Peganum Harmala were tested in three different times (24, 48 and 72h) on trophozoites of Acanthamoeba in vitro.Live parasites were colored by trypan blue and the count were recorded with a hemocytometer. Then the IC50 were calculated using Prism software.

Results: The extract indicated a time and dose-dependent amoebicidal interaction on the trophozoites.Peganum Harmala extract in 10mg/ml concentration have the most inhibitory effect on Acanthamoeba after 72h. Our studies showed that different concentrations of Peganum Harmala extract have a good anti Acanthamoeba activities.

Conclusion: While the alcoholic extract of Peganum Harmala have anti- Acanthamoeba effect, Since Peganum Harmala is a herbal drug, it can be tested in vivo.

Keywords: Acanthamoeba, alcoholic extract, Peganum Harmala, in vitro

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-132

In vitro effect of Estonia extracts of Moringa peregrina against Trichomonas vaginalis

Mina Ebrahimi[1], mina.ebrahimi[2], Javid Sadraei [3]

1-Department of parasitology,Faculty of Medical science, Tarbiat Modares university,Tehran,Iran

2-Masters student, Department of parasitology, faculty of Medical sciences, Tarbiat Modares University, Tehran, Iran

3-Department of parasitology,faculty of Medical sciences, Tarbiat Modares University,P.O.BOX.14115-331 Tehran, Iran

* Corresponding author**:** Javid Sadraei

Department of parasitology,Faculty of Medical science, Tarbiat Modares university,Tehran,Iran. **Email:** mina.ebrahimi@modares.ac.ir

Abstract

Background: Background: Trichomoniasis is a very common sexually transmitted disease (STD) that is caused by infection with a protozoan parasite called Trichomonas vaginalis. Metronidazole is yet used widely in the treatment of T. vaginalis, but some resistant strains to this treatment have been identified. Moreover, treatment with metronidazole is associated with several side effects. Thus the search for new drugs to overcome these problems is needed. Objective: This study aims to evaluate the effect of Moringa peregrina on T. vaginalis in-vitro.

Material and methods: Materials and Methods: A clinical isolate of T. vaginalis was cultured in TYM (Trypticase Yeast Extract) medium supplemented with 10% bovine serum. The effect of Moringa peregrine estonia extract on T. vaginalis were evaluated in concentrations of 375, 750, 1500, 3000 and 4000 µg/ml in two time points; 24h and 48h. Metronidazole drug is used as positive control at concentrations of 0.03, 0.06, 0.12, 0.25, 0.5 and 1 µg/ml. Live parasites were stained with trypan blue and their numbers were counted using a hemocytometer. Then the value of IC50 was calculated using Prism software for both groups.

Results: Results: M.peregrina extract in concentration of 4000 µg/ml has the most effect in T. vaginalis inhibition after 48h.The IC50 values of Moringa peregrina extracts and Metronidazole were calculated as 1.18 and 0.62 respectively. Our studies showed that different concentrations of M. peregrina extract have a good anti T. vaginalis activities. so future research for clinical investigation of M. peregrina is recommended.

Conclusion: Conclusion: Due to the effect of Moringa peregrine estonia extract on Trichomonas vaginalis, this plant could be a good candidate to replace metronidazole with that.

Keywords: Trichomonas vaginalis, Moringa peregrina , estonia extract

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-133

Isolation and genotyping of Acanthamoeba strains from corneal infection

Tooran Nayeri chegeni[1], Fatemeh Ghaffarifar [2], Fariba Khoshzaban[3], Abdolhosein Dalimi ASL [4]

1-Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran

2- Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

3-Department of Parasitology, Shahed University of Medical Sciences, Tehran, Iran.

4-Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

* Corresponding author**:** Fatemeh Ghaffarifar
Department of Parasitology , Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran. **Email:** tooran.nayeri@modares.ac.ir

Abstract

Background: Acanthamoeba is one of amphizoic amoebae , Can be found in all environments. Acanthamoeba keratitis getting occurs after impact in the eye, rinse with contaminated water or use of contact lenses. The aim of the present study was to identify the genotypes of Acanthamoeba in all patients with a clinical diagnosis of Acanthamoeba keratitis who were referred to to Araba Hospital using molecular -based methods.

Material and methods : In this study, 8 samples collected from keratitis patients including 1 men and 7 women with an average age of 25 years, who were referred to Farabi Eye Hospital (Tehran, Iran) .samples (corneal scraping , corneal biopsy,tear,contact lens) cultured on non-nutrient agar(NNA) plates enriched with Escherichia coli K12. Amoebae in plates were washed using Phosphate- buffered saline DNA extraction and PCR amplification was performed using genus specific primers. Sequencing analysis and BLAST search were conducted for determine the genotypes.

Results: Every 8 cases were positive for Acanthamoeba using genus specific primer pairs.all specimens were reported genotype T4.Who pathogenic genotype is to create the keratitis.. It was shown band approximately 500bp by PCR method.

Conclusion: Determine the genotype showed that all isolates belonged to type T4. considering the prevalence of Acanthamoeba keratitis in wearer contact lenses, more attention to the potential role of contact lenses and solutions of washing by physicians and health practitioners is necessary.

Keywords: Acanthamoeba, Genotype, PCR.

هشتمین کنگره بین المللی آزمایشگاه و بالین
و
اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-134

Effects of Coconut water on the growth pattern of Leishmania major promastigotes

Vahid Nasiri[1], Gholamreza Karimi[2], Habibollah Paykari[3], Gholamreza Motamedi [4], Shahla Rivaz[5]

1-Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran

2-Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran

3-Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran

4-Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran

5-Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran

* Corresponding author**:** Vahid Nasiri

Department of Parasitology, Razi Vaccine and Serum Research Institute, Alborz, Iran. **Email:** v.nasiri@modares.ac.ir

Abstract

Background: The protozoan parasites of the genus Leishmania are the causative agents of different clinical diseases. Fetal Calf Serum (FCS) is the main part and the most expensive ingredient of the Leishmania culture media. Coconut water is packed with nutrients that yield an array of health benefits.

Material and methods: Here, the efficacy of different concentrations (1 %, 2.5%, 5% and 10%) of the Coconut water was evaluated as a growth stimulator in Leishmanian culture procedure.

Results: The results indicated that culture media enriched with the Coconut water could not support the growth of the parasites and cannot be used for cultivation of Leishmanian parasites.

Conclusion: In conclusion, this study we should investigate for other alternative low- cost medium that could be used in cultivation process of Leishmania major promastigotes.

Keywords: Coconut water, Fetal Calf Serum, Leishmania major.

PP-135

Lupoid leishmaniasis among the known cases of cutaneous leishmaniasis in Herat Province, western Afghanistan

Mahdi Fakhar[1], Hossein Pazoki1[2], Abobakar Rasooli [3], Elham Sadat Banimostafavi [4], Mehdi Karamian [5]

1-Molecular and Cell Biology Research Center, Department of Parasitology and Mycology, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

2-Student Research Committee, Department of Parasitology and Mycology, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

3-National Health Coordinator (NHC) and Head of Herat WHO Sub –office, Herat

4-Radiology Department, Imam Khomeini Hospital, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

5-Cell and Molecular Research Center, School of Medicine, Birjand University of Medical Sciences, Birjand, Iran

* Corresponding author**:** Mahdi Fakhar

Molecular and Cell Biology Research Center, Department of Parasitology and Mycology, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran. **Email:** mahdif53@yahoo.com

Abstract

Background: Lupoid cutaneous leishmaniasis (LCL) is an uncommon form of chronic cutaneous leishmaniasis, which is mostly caused by Leishmania tropica in the Old World and has a high incidence throughout early life.

Material and methods: Between 2012 and 2013, patients with active lesions suspected to be cutaneous leishmaniasis (CL) were examined. Diagnosis was performed through a combination of methods ,i.e., clinical examination, direct smears and kDNA polymerase chain reaction (PCR).

Results: Overall, 162(4.2%)subjects, through clinical examination and PCR confirmation alone,were diagnosed as having LCL, with the duration of the lesions varying from 2 to 5 years. Most (85.8%) of the subjects with LCL were< 20 years of age. No amastigote was found in direct smears. Moreover, direct PCR on the negative smears for identifying Leishmania provided a specificity of 100%, and the species was identified as Leishmania tropica using specific kDNA PCR.

Conclusion: Performing PCR on skin smears appears to offer a valuable method for the diagnosis of LCL because it is highly specific and sensitive, especially for clinical correlative studies.

Keywords: Lupoid cutaneous leishmaniasis, Specific kDNA PCR, Leishmania tropica, Afghanistan

PP-136

Sero Molecular Prevalence study of Toxoplasma infection in Beta-thalassemia major patients using ELISA and LAMP methods in 2015

Houman Hanifehpour[1], Hooman Hanifehpour[2], Vafa Saber[3], Shahram Khosravi[4], Seyed kamal samsam shariat[5], Mohammad saleh Ghafari[6]

1-Shahrekord University of Medical Science

2-Food and Drug Administration,Section of Biological Control

3-Beheshti University of Medical Science

4-Head of Biological Control and Laboratory in Food and Drug Administration

5-Student of Shahrekord University of Medical Science

6-Student of Shahrekord University of Medical Science

* Corresponding author**:** Houman Hanifehpour

Shahrekord University of Medical Science. **Email:** hoomanhanifehpour@yahoo.com

Abstract

Background: Toxoplasma infection is one of the most prevalent and serious infectious diseases in immunodeficiency persons such as in beta-thalassemia major patients. The study was carried out to determine the sero-prevalence of anti-Toxoplasma antibodies in beta-thalassemia major patients.

Material and methods: A total of four hundred and seventy serum samples were collected from beta-thalassemia major patients referring to Hajar hospital in Shahr-e-kord,Iran as the test group and healthy individuals as the control group (i.e. each group consisted of 235 samples).The demographic data were collected via questionnaire forms and the sera and blood samples were examined for specific anti-Toxoplasma antibodies(IgM,IgG) using ELISA and LAMP method. The processing of data was accomplished by the software, SPSS ver.20 and analysed by the Chi-square test, Independent T test and Logistic regression model.

Results: Out of 235 sera belonged to the beta-thalassemia major patients, 122(51.9%) and 8(3.4%) sera were positive for anti-Toxolasma IgG and IgM antibodies, respectively. However, these positivity rates were 82(34.8%) and 5(2.1%) for anti-Toxoplasma IgG and IgM in the control group. There were significant differences between sex, age, contact with cat, job, Meat consumption in case group ($p<0.001$) and also There were significant differences between sex, age and Meat consumption in control group ($p<0.001$). also molecular results showed that 14(5.95%) positive in control group and 23(9.78%) positive in case group.

Conclusion: It is likely that the majority of Toxoplasma infections in beta-thalassemia major patients have been occurred prior to their malignancy. However, malignancy may reactivate the latent Toxoplasma infections and predispose the patients for acute systemic infection.

Keywords: Toxoplasmosis-ELISA-LAMP-Beta-thalassemia major

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-137

Molecular investigation of mbl gene polymorphisms and its relation with Chlamydia trachomatis in vaginal infection

Samira Javidtabar[1], Jalil Vand Yousefi[2], Hussein Rasi[3]

1-Azad Islamic univercity of Karaj, college of Basic Sciences

2-PhD in microbiology, Department of Basic Sciences, Islamic Azad University of Pharmaceutical Sciences, dental College, Tehran.

3-PhD in Genetics, Islamic Azad University of Karaj.

* Corresponding author**:** Samira Javidtabar

Azad Islamic univercity of Karaj, college of Basic Sciences. **Email:** javidsamira@yahoo.com

Abstract

Background: Vaginal infections caused by Chlamydia trachomatis are the most common sexually transmitted bacterial infections. Since this bacteria is a mandatory intracellular parasite, the treatment of it is difficult and can involve multiple sexual partners. As a result, to reduce the cost of treatment, especially in secondary diseases and the prevention of abortion, screening tests, for sexual partners is necessary. On the other hand, host genetic background, including some mbl gene polymorphisms, play an important role in determining of the immunogenicity and clinical Process of infections. mbl gene product, is an important serum protein in activation of the complement pathway involved in innate immunity that attaches to specific mannose on the surface of microorganisms. A allele, is structural normal allele of mbl gene. Single nucleotide mutations in exon 1 codon 54, leads to B allelic variants. Study of mbl gene polymorphisms and their association with Chlamydia trachomatis, is important in early detection and treatment of Chlamydiosis. Therefore, this study examined the molecular analysis of mbl gene polymorphisms and its relationship with Chlamydia trachomatis, vaginal infections.

Material and methods: In this study, samples were taken from 105 female endocervical, by swab, a women's clinic in Karaj. DNA extraction was performed by kit Cinnagen. In order to determine the codon 54 polymorphisms in mbl gene, the PCR-RFLP method was used and to determine Chlamydia infection, PCR method was used. For statistical analysis results, was used the software Epi info.

Results: Age of the sample group were evaluated from 17 to 52 years and the age average was 23/30. The age range of 35-25 years had the highest frequency among the patients. Among the 47 patients with clinical symptoms, were diagnosed 11% with Chlamydia trachomatis bacteria and in the control group of 58 people as well as were contaminated 2 people. There is 27% the history of abortion in subjects. The PCR-RFLP showed that the frequency of A allele in patients was 59%, in the control group was 10% and in patients with chlamydia was 80%. The frequency of B allele in patients was 40%, in the control group was 19% and in patients with chlamydia was 90%.

Conclusion: Results Statistical analysis showed that the prevalence Chlamydiosis was statistically significant in vaginal infections and in patients with the history of abortion($p<0.05$). The B allele increases the risk of vaginal infections and the risk of Chlamydiosis($p<0.01$). The results showed a correlation between mbl gene, codon 54 variants and prevalence of Chlamydia trachomatis is significant in patients compared to healthy individuals($p<0.01$).

Keywords: Chlamydia trachomatis, vaginal infections, polymorphisms, codon 54, mbl gene

اولین کنگره ملی علوم پایه پزشکی و تولید دانش بنیان
و
هشتمین کنگره بین المللی آزمایشگاه و بالین
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-138

Evaluation of intestinal protozoan infections on human stress and immune systems in selected Tehran hospitals

Vahdat Haji Hoseinlou[1], Mina Ranjbaran[2], Shahnaz Shribazou[3], Hedayat Sahraei[4]

1-Neuroscience Research Center, Department of NeuroParasitology, Baqyiatallah (a.s.) University of Medical Sciences

2-Department of Physiology, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran

3-Neuroscience Research Center, Department Department of NeuroParasitology, Baqyiatallah (a.s.) University of Medical Sciences, Tehran, Iran

4-Neuroscience Research Center, Department of NeuroParasitology, Baqyiatallah (a.s.) University of Medical Sciences

* Corresponding author**:** Shahnaz Shribazou[3]

Neuroscience Research Center, Department of NeuroParasitology, Baqyiatallah (a.s.) University of Medical Sciences. **Email:** vahdathaji@yahoo.com

Abstract

Background: Intestinal protozoan pathogens are unicellular eukaryotes which lead to serious injuries and infection in human with or without clinical symptoms. It seems that parasitic infections as a stressor factor may affect on stress system activity and immune system function. The major purpose of this study was to evaluate serum cortisol level and the general inflammation by measuring neutrophil to lymphocyte ratio in patients with intestinal protozoa.

Material and methods: A total of 40 men referred to selected Tehran hospitals, were equally divided into 2 groups based on infection with the intestinal protozoa (control and patient groups). This study was conducted on blood samples of these people. Serum cortisol level and neutrophil to lymphocyte ratio were determined in two groups. Cortisol was measured using cortisol kit (Diagnostic Biochem, Canada) and by ELISA method. In addition, the samples were treated with Wright stain method and neutrophil to lymphocyte ratio was calculated using WBC diffraction method.

Results: According to the results of this study, mean age between control and patient groups was not statistically significant. Serum cortisol concentration in patients with the intestinal protozoa was significantly higher than the control group. In addition, a significant increase was observed in neutrophil to lymphocyte ratio in patient group compared to the control group.

Conclusion: Based on the results of this study, parasitic infection (intestinal protozoa) as a stressor factor increases serum cortisol concentration. In addition, intestinal protozoa reduced immune system sensitivity and function. It seems that the neutrophil to lymphocyte ratio can be a potential useful parameters for evaluating the stress system activity and function in patients infected with the intestinal protozoa.

Keywords: Intestinal protozoan infection, Cortisol, stress, Neutrophil to lymphocyte ratio

هشتمین کنگره بین المللی
و
آزمایشگاه و بالین
اولین کنگره ملی علوم پایه پزشکی
و تولید دانش بنیان
تهران، مرکز همایش های بین المللی رازی ۱۹-۱۷ بهمن ماه

PP-139

The Molecular Method in Diagnosis of Ocular Toxoplasmosis in Tehran

Houman Hanifehpour[1], Vafa Saber[2], samsam shariat[3], hooman hanifehpour[4]

1-student of Shahrekord University of medical science

2-Beheshti University of Medical Science

3-shahr-e-kordUniversity of Medical Science

4-Section of Biological Control and Laboratory in Food and Drug Administration

* Corresponding author**:** Vafa Saber

student of shahrekord university of medical science. **Email:** hoomanhanifehpour@yahoo.com

Abstract

Background: Toxoplasmosis is one of the most prevalent parasitic infections common between human and animals. The disease can be either acquired or congenital. Toxoplasma gondii (T. gondii) is considered as an opportunistic and dangerous infection in Immunusuppressed individuals or pregnant women. The parasite reaches to the eye and its retina through circulation and causes irrecoverable chorioretinitis. Attack to the eyes is chronic and sometimes infection relapses and the damaged retina and choroid would not repair. The posterior pole scares can persist a serious threat for the vision. Other symptoms of the disease consists of blurred vision, photophobia, vitreous inflammation, active and passive scares, and clinical signs. Molecular methods are carrying out complementary for recognition of acquired or congenital infections. The

aim of the current study is to evaluate efficiency (sensitivity and characteristic) of molecular method in isolation of T. gondii in ocular infections patients with healthy immune systems.

Material and methods: Blood sampling had done from major ophthalmology centers in Tehran (Farabi, Labbafinejad and Imam Hossein Hospitals). The clinical symptoms were examined and recognized. For examining possible relapse re-sampling was done in 15 and 30 days. Thereafter, the buffy coat of the samples was employed for DNA extraction using DNG kit. For performing the polymerase chain reaction (PCR), primer of the gene B1was applied.

Results: Following the PCR, from the 71 blood samples, 34 patients (47%) had positive form of the disease. However, with evaluating the first relapse, two weeks after the first step of the disease, among the 41 patients, 29 (70%) had positive reaction of the disease. These patients even showed positive PCR in the first step. In the third sampling step (30 days later), 19 patients were examined and 9 (47%) had positive reaction. In other words, in the second and the third steps there were no obvious incidents.

Conclusion: The diagnosis of T. gondii, often relays on clinical tests. Nevertheless, unusual clinical symptoms or differentiation of the disease from other alternative symptoms make the diagnosis problematic. However, sensitivity and characteristic of molecular PCR is of great interest. To conclude, for definite and final ocular toxoplasmosis diagnosis, clinical and complementary methods such as PCR can be employed.

Keywords: Ocular Toxoplasmosis-PCR-Toxoplasma gondii

PP-140

مقاله ۱۴۰ در فایل ورد نبود.

PP-141

Co-infection of Enterobius vermicularis and Taenia saginata mimicking acute appendicitis

Kasra Hassanjani Saravi [1], Mahdi Fakhar[2], Javad Nematian[3], Maryam Ghasemi [4], Elham Sadat Banimostafavi [5]

1-Department of Pathobiology, School of Medicine, Islamic Azad University, Tehran, Iran

2-Molecular and Cell Biology Research Center, Department of Parasitolgy, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

3-Department of Pathobiology, School of Medicine, Islamic Azad University, Tehran, Iran

4-Immuonogenetics Research Center, Department of Pathology, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

5-Radiology Department, Imam Khomeini Hospital, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

* Corresponding author**:** Mahdi Fakhar

Department of Pathobiology, School of Medicine, Islamic Azad University, Tehran, Iran. **Email:** mahdif53@yahoo.com

Abstract

Background: In this report, we describe an unusual case of verminous appendicitis due to Enterobius vermicularis and Taenia saginata in a 29-year-old woman from Iran.

Material and methods: Histopathological examination and a parasitological description of the both worm found in the appendix lumen are discussed.

Results: Removal Appendix showed the macroscopic and microscopic features of acute appendicitis.

Conclusion: Antihelminthic therapy was started with a single dose of praziquantel for taeniasis and mebendazole for enterobiasis and was discharged.

Keywords: Verminous appendicitis; Enterobius vermicularis; Taenia saginata

PP-142

INFECTION OF MALARIA IN PREGNANCY

Seyed hosein Mojabi[1], Chandy john [2], DR.Badri Sadat mojabi[3], DR.S.ali reza mojabi[4]

1-central healthy earchger of malaria shahid boilandian

2-The central reaserches of malaria in Minosota state of U.S.A.

3-pharmacologist Salt lake city Utah U.S.A.

4-M, D. T.U.M.S.

* Corresponding author**:** Seyed hosein Mojabi

Central healthy earchger of malaria shahid boilandian. **Email:** s_hoseinmojabi@yahoo.com

Abstract

Background: Malaria is one of the most important problems of healthy in our country, Iran. This disease is the most tropically prevalence and accrue by anopheles' sting that transfers plasmodium parasites. It appears with specific clinical and Para clinical symptoms .It has bad effects such as killing, economic and Irreparable on patients. It can affect about 50% of on the world's population, directly or indirectly. About 10% of people are living in contaminated areas, that mortality rate was 1.5-3 millions in previoUsly but it will be planed before 2030 can 90percent cured of it.Unfortunately were death 367000 to 755000 that were children up to 5 years of them

Material and methods: In this study we regurd two groups, pregnant mothers and newborns that are the most vulnerable to disease. They need to quick and emergency care. When the danger reaches to critical point, the healthy services are very important and critical. In 2008, there are 11140 patients with Malaria in Iran. In 1991, the affected numbers were 40000 that 69% of these were habited in Sistan-Baloochestan 12%-15% of pregnant mothers or newborns are prone to disease response. This may lead to miscarriage or death, respectively.

Results: The pregnant mothers and newborns are vulnerable because of the weak immune and we mast check with cure as quickly as possible as.

Conclusion: Conclusions: One of the most important notes is the "low weight of newborn" with infected mothers. Finally it will be more sever when the parasites passes through placenta to embryo. It will causes mental and physical retardation in newborn. Preventive factors such as mosquito- net, anti-fly sprays and avoid from migration, can be impacting on prevalence and propagating of disease.

Keywords: Malaria-Pregnancy-emergency-weak immune-mental retardation