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**P932: Aggregatibacter actinomycetemcomitans as a periodontopathic bacteria susceptibility to Camellia sinensis extracts**

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**Background and Aim:** Actinobacillus actinomycetemcomitans is considered to be one of the major oral putative pathogens. The strains A. actinomycetemcomitans with dental caries and periodontal diseases. This paper reviews the morphological, characteristics of A. actinomycetemcomitans, evidence incriminating it as a periodontopathogen, its importance in human nonoral infections, and virulence factors which may be involved in the pathogenesis of A. actinomycetemcomitans infections. The Camellia sinensis extracts is a naturally occurring product having beneficial effects that counteract with the pathobiological features of periodontitis. The study was aimed at incorporation of green tea extracts and investigates its efficacy in in vitro antimicrobial potential of methanolic extracts.

**Methods:** Camellia sinensis extracts was prepared by methanolic extraction method and diluted from 50 to 1.56 mg/ml. broth microdilution assays were applied for qualitative and quantitative determinations of antibacterial activity of extract on each strain. The inhibitory effect of the green tea methanolic extracts was tested against A. actinomycetemcomitans ATCC 33384. Incubated for 96 h in a 5% CO<sub>2</sub> incubator. The media used were; TSBV, , and an anaerobic blood agar (BHIA, 5% sheep blood, 5 mg of hemin per liter, 10 mg of menadione per liter). Bacterial counts were numbered as CFU/milliliter. solution of extract was prepared by dissolving 10 mg of plant extract in 10 ml DMSO. The following concentrations were prepared, 50, 25, 12.5, 6.25, 3.13, 1.56, and 0.78 mg/ml of the crude extract for determination of minimum inhibitory concentration, minimum bactericidal concentration (M<sub>L</sub> C). After 24 to 96 h of incubation by turbidimetric method or tube dilution method was used for determination of minimum inhibitory concentration (MIC), minimum bactericidal concentration (MBC).

**Results:** The in vitro study showed periodontopathic A. actinomycetemcomitans were sensitive to 10 and 12 mg/ml of this extracts. The minimal inhibitory concentration of green tea extract for A. actinomycetemcomitans the methanolic extract exhibited antibacterial activity against A. actinomycetemcomitans minimum bactericidal concentration was 20mg/ml.

**Conclusion:** Our findings showed that Camellia sinensis extracts exhibited strong antibacterial activity on, A. actinomycetemcomitans and therefore may be used in mouthwashes or dentifrices for prevention of dental caries and periodontal diseases. Green tea is a very popular beverage, and in vitro studies have shown that polyphenols inhibit the growth and cellular adherence of periodontal pathogens and their production of virulence factors. We investigated the epidemiologic relationship between the intake of green tea and periodontal disease.