Relationship between IL-6 and IL-10 Cytokines with Physical Activity in Chemical Victims: Sardasht-Iran Cohort Study

Rahnama P1*, Ghazanfari Z2, Ghazanfari T3, Naghizadeh M.M4
1Department of Midwifery, Shahed University, Tehran, Iran, 2Department of Public Health, Ilam University of Medical Sciences, Ilam, Iran, 3Immunoregulation Research Center, Shahed University, Tehran, Iran, 4Department of community medicine, Fasa University of Medical Sciences, Fars, Iran

Background: Relationship between inflammatory and anti-inflammatory cytokines with physical activity well documented in healthy people. The aim of this study was to determine the relationship between IL-6 and IL-10 cytokines with physical activity in sulfur mustard (SM) exposed people. Materials and Methods: In a historical cohort study, Sardasht-Iran Cohort Study (SICS), 372 SM exposed participants were studied twenty years after exposure. The global physical activity questionnaire (GPAQ) was used to obtain a self reported measure of physical activity. Serum and whole blood culture supernatants samples were used for interleukin 6 and 10 respectively. Cytokines were measured by ELISA method. Results: The mean age of participants were 44 (SD=11) and most of them were married (91%). The result of this study showed that there was a significant relationship between mitogen induced IL-10 and severity of physical activity but there was not relationship between IL-6 and severity of physical activity. Conclusion: It seems that there is a need to provide suitable programs for SM exposed victims by health care system. Keywords: IL-10, IL-6, physical activity, sulfur mustard