Association analysis of 3’UTR gene polymorphisms of TLR4, NLRP3 and miRNA with chronic periodontitis in South Indian ethnicity

Periodontitis is a chronic inflammatory disease of multifactorial etiology. Although gram negative anaerobes are essential in initiating the disease, many other factors determine the course and progression of the periodontal destruction. Among the various risk factors, the genetic component of the host plays a major role in periodontal destruction. The microbial agents are first screened by the pattern like receptors – Toll like receptors (TLR) and the signals are processed intracellularly by Nod like receptors - NLRP3. Thus, aim of the study was to analyze the association of 3’UTR polymorphisms of TLR4, NLRP3 gene and the micro RNAs regulating this region. The subjects were stratified into three groups - chronic periodontitis, aggressive periodontitis and controls. The sample size was 240. DNA extraction from blood samples was done and the polymorphisms were analyzed using real time PCR. The TLR4 (rs11536889), NLRP3 (rs10802501), miR-146a (rs2910164) were analyzed in this study.

Biography
G Kaarthikeyan has completed his Post-graduation in Periodontics and Implantology from Saveetha Dental College in 2007. He has been working at Saveetha University as Faculty since 2007. He is currently working as Professor and Clinical Head at Saveetha Dental College. He has more than 30 publications in various national and international journals. He has presented papers and posters at various international conferences. He has delivered many guest lectures as well as invited speaker for many conferences. His area of research involves the role of genetics in inflammatory disease and regenerative periodontics. He is the Editor of upcoming journal- International journal of Periodontal Rehabilitation. He is reviewer of many indexed journals and Editorial Board Member of few journals.

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