

## Evaluation of macrophage impression in dental pulp inflammation

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### **Abstract**

**Background and Aim:** Pulpitis is a dental pulp inflammation which recognize by inflammatory cytokines can cause with streptococcus. The aim of this study is to recognize of IL-36 gamma expression on macrophages cells from pulpitis and evaluate increasing factors of dental pulp inflammation by IL-36 gamma.

**Material and methods:** in this case control study, the normal and pulpitis tissue were isolated from 25 patients with extraction of wisdom teeth and Root canal therapies ones and macrophages cells were isolated from both tissues and treated with TLR4 by some courses. The mRNA of cells were isolated and IL-36 gamma expression were done with Real Time PCR. Analyzing evaluation was prepared by one way ANOVA and Tukey test.

**Results:** present study results showed that the IL-36 gamma expression in pulpitis group were high than normal group ( 43.09, 18.21 pg/ml) and the time courses showed that after 12 hours of treating the cells via TLR4 the expression of IL-36 gamma was high than other time courses. (p<0.001)

**Conclusion:** In pulpitis, IL-36 gamma was secreted from macrophages

**Key words:** Pulpitis, Innate immunity receptor, IL-36 gamma