

**Keywords:** *Porphyromonas gingivalis*, Synovial fluid, Rheumatoid arthritis, Real-time PCR

**Detection of *Porphyromonas gingivalis* DNA in the synovial fluid of rheumatoid arthritis patients by real-time PCR**

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**ABSTRACT**

**Introduction:** Microbial infections are believed to play an important role in the initiation and perpetuation of rheumatoid arthritis. This study aimed to investigate the relationship between the presence of *Porphyromonas gingivalis* DNA in the synovial fluid and rheumatoid arthritis.

**Methods:** The synovial fluid samples were collected from 22 patients with rheumatoid arthritis and 20 patients with not suffering from rheumatism, overall 42 patients were investigated. The presence of *P. gingivalis* DNA was evaluated by the real-time PCR method.

**Results:** There was a significant relationship between rheumatoid arthritis and non-rheumatoid arthritis with the DNA number ( $P < 0.05$ ). *P. gingivalis* DNA were detected in 3 of 20 (13.6%) rheumatoid arthritis patients, but there was no significant relationship between *P. gingivalis* DNA and rheumatoid arthritis ( $P > 0.05$ ).

**Conclusion:** DNA of periodontal pathogens can be found in the synovial fluid of rheumatoid arthritis patients. It shows oral bacteria may play a role in the pathogenesis of rheumatoid arthritis.



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rheumatoid arthritis by Real time PCR**

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