

# Gums Provide Clues to RA Severity

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LONDON -- The condition of a patient's mouth could be linked to the severity of rheumatoid arthritis, researchers from the Netherlands suggested here at the European League Against Rheumatism meeting.

In reviewing records of 95 patients with rheumatoid arthritis, Elisabeth Brouwer, MD, assistant professor of internal medicine at the University Medical Center in Groningen, reported that 18% of the patients had severe periodontal disease and 32% had moderate periodontal disease.

"In a normal adult population, about 10%-15% of people have moderate or severe periodontal disease," Brouwer told *MedPage Today* at her poster presentation here. "We think that the increased inflammatory process that is occurring in the mouths of patients with rheumatoid arthritis may be playing a role in their disease."

The researchers noted that co-existence of periodontitis and rheumatoid arthritis has been reported previously; both diseases have similarities in etiology and pathogenesis, and they share common risk factors.

Brouwer and colleagues illustrated that rheumatoid arthritis patients with periodontal scores of 1-2 -- signifying normal to mild disease -- had lower rheumatoid arthritis Disease Activity Scores than did patients with periodontal scores of 3-6 (moderate to severe), ( $P=0.047$ ). Brouwer also reported that in the milder cases of periodontal disease, the rheumatoid arthritis patients in that group had lower C-reactive protein levels than patients with worsening periodontal disease ( $P=0.012$ ).

"We believe these findings indicate that periodontal disease might contribute to arthritis severity," she said.

Brouwer explained that infective periodontitis which destroys the supporting soft tissue and hard tissue of the teeth shares risk factors with rheumatoid arthritis. The researchers suggested presence of the *Porphyromonas gingivalis* can trigger a molecular cascade that is linked to auto-antigens in rheumatoid arthritis, although of the 17% of patients with antibodies to the organism, 30% did not have periodontal disease.

"We think that if you want to have an impact on this disease you have to look in the mouth," Brouwer said. "It is an often-forgotten aspect of rheumatoid arthritis."

She said her results are similar to that found in a Swedish cohort in which 589 patients with rheumatoid arthritis were screened and 11% were found to have severe periodontal disease; 39% had moderate or severe periodontal disease. Brouwer said that 68% of the patients in her study were women. The mean age of the group was 57 years, with a range from 23 years to 76 years.. The mean duration of disease in this population was 7.4 years and the mean Disease Activity Score-28 was 2.4 -- indicating well-controlled disease. About 79% of the patients were taking disease-modifying agents and 15% were on anti-tumor necrosis factor medication; 6% were not taking any medication.

"The suspicion that periodontal disease and rheumatoid arthritis are connected goes back at least a century," said Dionicio Galarza-Delgado, MD, chief of medicine at the Universidad Autónoma de Nueva León, Monterrey, Mexico. "It is a very old theory."

"At one point it was believed that if you removed a person's teeth you could favorably impact rheumatoid arthritis," he told *MedPage Today* as he commented on the Dutch research.

"In our vision it may be that periodontal disease could be a cause of rheumatoid arthritis in some people, or a trigger for the development of the disease, or perhaps one of the causes of exacerbations of rheumatoid arthritis flares."

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Source reference:

de Smit M, et al "Prevalence of periodontitis is high in rheumatoid arthritis patients and may be linked to arthritis disease activity" *Ann Rheum Dis* 2011;70.3:274.