Periodontal Disease and a link to Rheumatoid Arthritis

By Ellen Zanichelli, RDH, BS

As an experienced Clinical Dental Hygienist, I had begun to notice that patients with Rheumatoid Arthritis or RA had an increased incidence of periodontal disease. I was also aware that many of these patients reported less joint pain following a scaling and root planing or periodontal therapy. Now there is scientific evidence supporting a link between periodontal disease and rheumatoid arthritis. 1% of the adult population is affected by rheumatoid arthritis. RA is a chronic inflammatory autoimmune disease.

It is initiated by an exposure event either by bacteria challenging the system or by the system having an autoimmune response that leads to significant synovial inflammation and its tissue degeneration. Periodontal disease is one of the most common diseases in humans. It affects 10-15% of all adults and up to 1/3 of all adults over the age of fifty. It is the leading cause of tooth loss in adults. It is caused by gram negative anaerobic bacterium that destroys the supporting structures surrounding our teeth. People respond differently to this bacteria depending upon systemic, environmental, and genetic risk factors.

Rheumatoid arthritis and periodontal disease are chronic inflammatory diseases which have similar features. They both cause local destruction of connective tissue and bone as a consequence of persistent inflammation. The role of the bacteria is not sufficient enough to cause the progression of disease with out the associated inflammatory response. There is an accumulation of inflammatory cells and both diseases have genetic and environmental influences.
Clinical research is showing that by eliminating periodontal infection by scaling and root planing the teeth of patients with rheumatoid arthritis, the RA patients show a decrease in joint pain. The investigators thought the improvement in the symptoms may be due to a decrease in the inflammatory products in the blood after periodontal therapy. Another explanation is that the elimination of bacterial plaque and indotoxins as a result of the periodontal treatment may also contribute to improving rheumatoid arthritis by reducing exposure of the joint structures to bacteria and their products. This evidence based research is important and applicable in a clinical practice of dental hygiene. It is important that systemic and local factors increased severity of periodontal disease be identified. Some controversy remains over the true nature of the association between rheumatoid arthritis and periodontal disease but the emerging evidence is indicating that an inter-relationship may exist. Rheumatoid arthritis should be included as a risk factor when performing a periodontal evaluation.

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