

**Assessment of salivary elements (Zinc,
Copper and Magnesium) among groups
of patients with rheumatoid arthritis
and chronic periodontitis and its
correlation to periodontal health status**

**A thesis submitted to the college of dentistry at the University
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Abstract

Background: Periodontal diseases are common in the society and some researchers suggested an association between rheumatoid arthritis (RA) and periodontal diseases.

Aims of study: To determine the periodontal health status in patient with RA and chronic periodontitis and compare it with those having chronic periodontitis without RA and determine the level of salivary elements Copper(Cu), Zinc(Zn) and Magnisum(Mg) in patients with rheumatoid arthritis and patients have no rheumatoid arthritis (RA) and compare with the control group. And correlate between these salivary elements with the periodontal parameters Plaque index (PLI), gingival index(GI), bleeding on probing(BOP), probing depth(PPD) and clinical attachment level(CAL).

Materials and Methods: In this study, the samples were recruited from patients referred to department of Rheumatology at Baghdad hospital. Seventy five female patients participated in this study, twenty five of them rheumatoid arthritis patient and had chronic periodontitis; twenty five were with chronic periodontitis and have no arthritis; Twenty five patients were periodontally and systemically healthy (control group). Patients with aging 40-50 with no other systemic diseases. The smokers and patients taking medication affecting periodontium status were excluded from the study. Also had normal weight and length. Plaque index(PL.I),gingival index(GI),bleeding on probing (BOP), clinical attachment level (CAL) index and probing depth (PD) were measured in all groups at four surfaces .Salivary elements (Zn, Cu and Mg) also measured in this study.

Results: Patients with RA had higher prevalence of sites presenting dental plaque, a higher rate of gingival inflammation and bleeding on probing, greater probing depth, and greater attachment loss compared with control. And high level of Copper and low level of Zinc and Magnesium.

Conclusion: The results suggest higher potentiality for moderate to severe periodontitis involvement among RA patients, with higher levels of Copper(Cu), and low level of Zinc(Zn) and Magnisum(Mg).