

**THE RELATIONSHIP BETWEEN  
PERIODONTAL DISEASE AND CHRONIC  
OBSTRUCTIVE PULMONARY DISEASE  
COMPLICATED BY POOR ORAL HYGIENE**

**A thesis  
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## *Abstract*

The purpose of this study was to determine the relationship between periodontal disease and chronic obstructive pulmonary diseases by evaluation of periodontal parameters and similarities between infecting microorganisms to the periodontium and lower respiratory tracts. Also this study was to determine the mechanisms of the effect of chronic obstructive pulmonary disease on the severity of periodontal disease by hypoxemia, difficulty in breathing resulting in dryness of the mouth and reduction in the amount of saliva that will be bathing the teeth and gingival tissue, and the bacterial invasion to the gingival tissue which occurs, resulting in periodontal disease.

The sample of this study consisted of 60 subjects, age range (40-75) years of both sexes. The sample was divided into two groups, 30 in each. The first group, patients with chronic obstructive pulmonary and periodontal disease but they don't have other risk of diabetes or taking drugs as (antihypertensive, antiepileptic, antibiotic and cyclosporin, The second group (control group, patients with periodontal disease only and don't have any other systemic diseases).

The clinical evaluation consisted of the following periodontal parameters: 1- plaque index (silness and Loe, 1964). 2- Gingival index 3- probing pocket depth 4- clinical attachment loss. While the microbiological evaluation including the cultivation and identification of microorganisms were isolated from the dental plaque of the two groups, sputum of the study group and throat swabs of the second group.

The statistical analysis showed that a significant differences were found in respect to plaque index, gingival index, clinical attachment loss when comparing between COPD group with the control group. No

significant difference were found in the probing pocket depth between the two groups but the COPD group showed higher value.

The microbiological identification showed that similarities in the aerobic and facultative anaerobic microorganisms that causes the periodontal disease and COPD exacerbations.