CHRONIC OBSTRUCTIVE PULMONARY DISEASE ASSOCIATED WITH SMOKING

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By

Qais Khazal Kadhum

(B.D.S)

Supervised by

Prof.Dr. Khulood A .Al-Safi
B.D.S, M.Sc., Ph.D.

Assist. Prof. Dr.Abbas S. Al-Mizrakchi
B.Sc., M.Sc., Ph.D.

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Abstract

The purpose of this study was to determine the relationship between periodontal disease and chronic obstructive pulmonary diseases in the presence of smoking as a risk factor by evaluating the periodontal parameters and similarities between infecting microorgansims to the periodontium (dental plaque) and lower respiratory tracts, also 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 occur, resulting in periodontal disease.

The sample of this study consisted of 90 subjects, age range (35-45) years for both sexes, the sample was divided into two groups study group and control group, 45 subjects in each group, each group was further subdivided into three subgroups 15 subjects in each, the study group(non-smoker patients with chronic obstructive pulmonary disease and periodontal disease and don't have other risk of diabetes or taking drugs as antihypertensive, antiepileptic, antibiotic and cyclosporine), (smoker patients less than 10 cigar/day with chronic obstructive pulmonary disease and periodontal disease), and (smoker patients more than 10 cigar/day with chronic obstructive pulmonary disease and periodontal disease) .

The control group includes, subjects with periodontal disease only and don't have chronic obstructive pulmonary disease or any other systemic diseases, with same subdivision for study group.

The clinical evaluation depend on the following periodontal parameters:

1- Plaque index.
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 and throat swabs of two major groups .

The statistical analysis showed that a significant differences were found in respect to plaque index, gingival index, probing pocket depth when comparing between study group with the control group. No significant difference were found in the clinical attachment loss between the two groups although the study group showed higher value.

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

For salivary flow rate there was a significant difference between study group and control group, as a result of using the anti-cholinergic drug in treatment of COPD, together with mouth breathing.

In general, it is concluded that the study group had higher mean values of plaque index, gingival index, probing pocket depth and clinical attachment loss than the control group, both study and control group showed the same types of microorganisms in plaque sample and in throat swab and patients with COPD showed lower rate of salivary flow than those of control group.