



A CORRELATIVE STUDY OF C-REACTIVE PROTEIN IN PERIODONTITIS WITH AND WITHOUT DIABETES MELLITUS.

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ABSTRACT

Background: India is at a high risk of developing Periodontitis and diabetes mellitus. C- reactive protein increased in inflammation and diabetes is an inflammatory atherothrombotic condition whereas in Periodontitis there is inflammation of alveolar tissues. In present study we determined significance of C - reactive protein in diabetes and periodontal patients.

Materials and Methods: 100 patients who were found to have Periodontitis with and without DM (each 50) at admission or OPD were enrolled. Their risk factors were compared with 50 age and sex matched who did not have Periodontitis.

Results: In present study we studied association of c-reactive protein in periodontitis and diabetes patients in different age groups The level of CRP was found 30% positive and 70 % negative in non diabetes mellitus with non Periodontitis, 45% positive and 55% negative in non diabetes mellitus with periodontitis and 57 % positive and 43 % negative in diabetes mellitus and periodontitis. p value (< 0.05)

Conclusion: Chances of periodontitis in poor glycemic control is high whereas diabetes progression leads to periodontitis. CRP is important in diagnosis, prognosis and medical management of both diseases.

KEYWORDS : Periodontitis CRP C- reactive protein, type 2 diabetes mellitus

INTRODUCTION

India is at a high risk of developing periodontitis and diabetes mellitus. Diabetes mellitus is a disease in which glucose metabolism is impaired and hyperglycemia occurs, due to complete absence of insulin secretion or resistance to insulin receptors. Whereas periodontitis is inflammation of gums which also affect teeth surrounding tissues resulting in teeth loss. Association between periodontitis and diabetes mellitus has been reported in literature.^[1] C- reactive protein increased in inflammation and diabetes, is an inflammatory atherothrombotic condition whereas in periodontitis there is inflammation of alveolar tissues.^[2] In present study we determined significance of c-reactive protein in diabetes and periodontal patients.

MATERIAL AND METHOD

We studied 150 subjects and divided them in three groups. A group 50 subjects of diabetes with periodontitis. B group 50 subjects non diabetes with periodontitis. C group 50 subjects non diabetes with non periodontitis. We performed present study in dentistry OPD tertiary care center Jhalawar Rajasthan. Venous blood sample collected for data of c-reactive protein. Ethical permission was taken from Jhalawar ethical committee for present study. C-reactive protein was measured by semiquantitative turbidimetric method.^[3-4]

Reference Range
Positive or negative

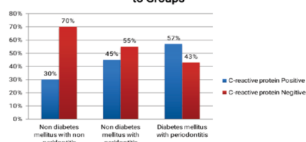
RESULTS

In present study , We studied association of c-reactive protein in periodontitis and Diabetic patients in different age groups. The level of CRP was as follows - 57% Positive in Group A (DM With Periodontitis), 45% Positive In Group B (Non DM with Periodontitis), and only 30% positivity was seen in Group C (Non DM with Non Periodontitis).

Table 1. Distribution of C-reactive protein according to groups

Biochemical Parameter	Non diabetes with non periodontitis	Non diabetes with periodontitis	Diabetes with periodontitis	Chi square	P value
CRP					
Positive	15 (30%)	23 (45%)	29 (57%)	7.984	0.0184
Negative	35 (70%)	27 (55%)	21 (43%)	7.984	0.0184

Distribution of C-reactive protein according to Groups



DISCUSSION

There is strong correlation between Periodontitis (oral infection) with diabetes mellitus (systemic disease). Their is increased c-reactive protein level in inflammatory condition including DM. In present study, 57% of Group A Patient's with both DM and Periodontitis had Positive CRP compared to only 30% positive in control group (C).

CONCLUSION

Present study demonstrated that diabetes and Periodontitis disease are interrelated. Chances of periodontitis in poor glycemic control are high whereas diabetes progression leads to Periodontitis. CRP is important in diagnosis, prognosis and medical management of both diseases.^[7-8]

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