



Chronic periodontitis as risk indicator for peri-implantitis



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Background: Peri-implantitis is an inflammatory process caused by a microbial origin and it can lead to bone loss and if not treated could cause loss of the implant-supported prosthodontic restoration. Previous periodontal disease is most common noted risk indicator for peri-implantitis.

Aim: The main aim of this study was to evaluate if patients with a history of chronic periodontitis are more susceptible to peri-implantitis than patients without history of chronic periodontitis.

Material and method: Total numbers of 75 subjects with 84 osseointegrated implants were evaluated. All patients were divided into two groups according to their peri-implant status: group A (patients without peri-implantitis) and group B (patients with peri-implantitis). All peri-implant regions were clinically evaluated (presence of mucosal inflammation, edema and implant mobility) and periapical radiographs were done for accessing peri-implant bone loss. On all of the patients, a periodontal examination was done for noting the presence of the clinical signs and symptoms of chronic periodontitis.

Results: Results from this study showed a highly significant correlation between history of chronic periodontitis and peri-implantitis ($p < 0.0001$). Patients with chronic periodontitis had shown higher bleeding on probing index ($p = 0.003$) when compared with patients without chronic periodontitis. Also this groups showed higher bone loss around implants ($p = 0.006$) Also, patients with chronic periodontitis showed 5 times more chance of developing peri-implantitis than those with healthy periodontium.

Data	Total (n=75)	Control group (n=39)	PID group (n=36)	p-value	OR (CI)
Mean age (years)	57.0 ± 16.7	58.8 ± 19.2	57.1 ± 10.7	0.07	---
Gender (%)					
Female	41 (54,66 %)	21 (53.84%)	20 (55.5%)	0.40	1.29 (0.68-2.45)
Male	34 (45,33 %)	18 (46,15%)	16 (44.4%)		

Peri-implant status	Total (n=75)	Control group (n=39)	PID group (n=36)	p-value	OR (CI)
Bleeding on probing	24 (32 %)	5 (12.8%)	19 (52.8%)	0.00001	8.54 (4.31-17.08)
Spontaneous bleeding	3 (4%)	0	3 (8.33 %)	0.00001	2.64 (2.18-3.82)
PPD (mm)	2.8±0.9	3.2 ± 0.68	2.6 ± 1.28	0.05	-----
Bone loss (mm)	1.91±2.33	0	2.23±2.55	0.08	-----
Mobility (presence)	5 (1.5 %)	0	5 (13.88%)		
Osseointegration period (months)		57.33±20.16	68.5±70.8	0.095	-----

Conclusion: This study once again proved that chronic periodontitis is a significant risk indicator in the development of peri-implantitis.