

# A RETROSPECTIVE STUDY TO EVALUATE SOME POTENTIAL RISK INDICATORS ON OSSEOINTEGRATED DENTAL IMPLANTS IN A SAMPLE OF IRAQI PATIENTS

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**ABSTRACT :** Determining risk indicators for dental implants is an essential strategy for preventing peri-implant diseases and effective diagnosis of dental implant success. To investigate the impact of certain potential factors on the osseointegrated dental implant. Eighty-four individuals were included in our study, 50 cases as a patient's group and 34 participants as a control group. All cases were diagnosed based on certain criteria, 30 (60%) of patients had peri-implantitis, 20 (40%) with severe peri-implantitis, 36(72%) were generalized, and 15 (30%) as localized peri-implantitis cases. The study has indicated that 44.7% of dental implants were in the anterior maxilla, followed by (27.3%) posterior maxilla, (17.4%) posterior mandible, and (10.4%) anterior mandible. Also results were showed that the anterior maxilla was significantly the highest ( $P=0.000$ ) in the incidence of PID than any other implantation sites (PMx, PMA, AMa). The most patients' complaint was 28(56%) altered gingival appearance, followed by 20(40%) pathological mobility, 16(32%) halitosis, 16(32%) pain, 12(28%) bleeding, 8(16%) unpleasant taste. The majority of the implants in both groups were long, regular-width, conical and had a rough surface In the patient group, all risk indicators related to implant design were showed a significantly higher than the control group, except for regular-width and screw type implant, which were significantly lower than control. In conclusion, the study improved that many different potential risk indicators contributed to the development of PIDs.

**Key words :** Risk indicators, dental implants, peri-implant diseases.

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## INTRODUCTION

Peri-implantitis is an infectious disease characterized by inflammatory mucosal lesion with bone loss around the osseo-integrated dental implant. The dental implant is an artificial device usually made of titanium (Ti), inserted into the bone for replacing one or more missing teeth and healthy periodontium is an essential for implant treatment. Regard to peri-implantitis it should be presumably mention risk indicators as no longitudinal possible studies are available, which would identify true risk factors (Lindhe *et al*, 2008). Risk indicators of peri-implantitis are diverse and can summarize as following:

History of periodontitis, many studies have been showed positive relationship between history of periodontitis and current peri-implantitis (Ferreira *et al*, 2018; Schwarz *et al*, 2018). Heitz-Mayfield and Huynh-Ba, were stated that patients with a history of periodontitis

are at greater risk for peri-implantitis than non-periodontal patients as the measured odds ratios (OR) run from 3.1 to 4.7(Heitz-Mayfield and Huynh-Ba, 2009).

There is strong evidence of a positive correlation between poor oral hygiene and peri-implantitis. An early prospective study was reported a link between peri-implant bone loss and poor oral hygiene, particularly in smokers (Lindquist *et al*, 1997). Another study was documented the accessibility to oral hygiene correlated significantly with the stability of the peri-implant (Serino and Ström, 2009). A Brazilian study noted that an increased risk of peri-implantitis was in non-smoking individuals suffering from poor metabolic control (Ferreira *et al*, 2006). As well as there is a clear correlation between smoking and peri-implantitis in which adjustment was made for poor oral hygiene. The (OR) range was between 3.6 and 4.6 (Rodriguez-Argueta *et al*, 2011).