THE INFLUENCE OF SOFT TISSUE THICKNESS ON THE CRESTAL BONE CHANGES AROUND DENTAL IMPLANTS: A 1-YEAR PROSPECTIVE CLINICO-RADIOLOGICAL STUDY.

By

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ABSTRACT

Background and Objectives: The concept of early crestal bone loss after prosthetic loading of an implant was observed and was considered to be normal. Multiple factors like the gingival sulcus, microgap between the implant-abutment interface, a polished implant neck and implant overload have been discussed extensively and studied as factors for contributing the crestal bone changes around the dental implants in the 1st year post loading. However, the influence of mucosal thickness and biologic width formation on crestal bone loss around implants has received little attention and the research pertaining to this is very little. The aim of the present study was to evaluate the influence of gingival tissue thickness on crestal bone levels around dental implants after a 1-year follow-up.

Material and methods: A total of 33 implants were placed in 22 subjects (10 males and 12 females) between October 2009 to July 2010 were evaluated for a period of 12 months. Initial mucosal thickness, modified plaque index (mPI), modified gingival index (mGI), marginal bone levels on radiographs, pain, exudation, mobility, bleeding on probing (BOP) and pocket probing depth (PPD) were evaluated. All these parameters were recorded at baseline i.e. at the time of implant placement, at the time of cementation of final restoration, 6 months and 12 months post cementation/restoration.

Results: The study showed that there was some amount of crestal bone loss around the dental implants exhibiting either initially thick or thin mucosal tissues after implant placement and 1 year in situ. However, significant marginal bone recession was less if the initial gingival tissue thickness was

2.5mm or more. P<0.05/

Conclusion: Thus it was concluded that the gingival architecture exhibiting an *initially thick mucosa was better for the placement of dental implants than* initially thin mucosa.

Key Words: Dental implants, mucosal thickness, crestal bone loss, biologic width, microgap.