

**CRESTAL BONE CHANGES
AROUND DENTAL IMPLANT
" *COMPUTERIZED ANALYSIS* "**

A Thesis Submitted To
The College Of Dentistry University Of Baghdad
In Partial Fulfillment Of Requirements For
The Degree Of Master Of Science
In Oral And Maxillofacial Surgery

By
Afyaa Sahib Diab
B.D.S

Supervised By
Prof. Dr. Khalid Yousif Igzeer

**B.D.S.(Baghdad)
M.Sc.(London)
F.F.D.R.C.S.I.**

BAGHDAD – IRAQ

2004

Abstract

Implants are well accepted as a means of dental rehabilitation. Even with a high integration success rate, crestal bone loss can occur, the aims of the present study was to evaluate crestal bone changes around dental implants.

Bone level were measured around 354 implants in 88 patients retrospectively and 97 implants in 31 patients prospectively, the total number was 451 implants in 119 patients, patient age was above 21 years old.

Panoramic radiograph were taken: after surgery, uncovering surgery, prosthetic placement, after 4-6 months of loading and during recall appointments. Radiographs were digitized, aligned and analysis with a computer software associated method to measure the actual bone changes in mesial and distal side of the implant during these periods.

Over all, the study implants experienced most of its crestal bone loss during the preloading period, followed by dramatic decrease in bone loss rate through the subsequent study intervals.

The result of the present study showed that there is significant positive correlation between crestal bone loss and age, female showed highly significant higher amount of bone loss than male in stage-1, while the apposite figure found in stage-2.

Data analysis during preloading time indicates significant bone loss with implant location, while highly significant bone loss had been seen with arch, bone density, implant design, case type and modified surgical procedures (sinus lift, bone filler, bone shell). While implant length, implant diameter, implant stability had a non significant effects on crestal bone loss.