

RADIOGRAPHIC EVALUATION OF RIDGE-SPLIT VERSUS ONLAY BONE GRAFTING IN THE MANAGEMENT OF NARROW MANDIBULAR RIDGE

Abd-El Moez El-Sharkawy,* Mohamed Galal Beheiri** and Mohamed El-Sherbini***

ABSTRACT

Horizontal alveolar atrophy creates a challenging situation for insertion of dental implant; onlay bone grafting has long been the surgical technique of choice for horizontal augmentation of width deficient mandibular ridge. **The aim of this study** was to evaluate ridge-splitting versus onlay bone grafting in management of narrow mandibular ridge both histologically and radiographically. **Patients and Methods:** six patients (3 males and 3 females) with an average age 40.5 years. The anterior mandibular horizontal alveolar dimension was ≥ 3 mm measured from the labial cortex to the lingual cortex. The radiographic evaluation was performed preoperatively and two weeks and six months postoperatively using CT machine with Dentascan software. **Results:** the radiographic results showed a mean linear graft width reduction of 37.5% for the onlay graft and a 47.2 % for the ridge-split, six months postoperatively while the mean change in density of the graft sites were found to be 8.3% and 10.2% for the onlay grafted and ridge split graft sites respectively.

INTRODUCTION

Loss of teeth has been and still is a problem that receives great concern; the end result is a partially or totally edentulous jaw. The jaw bone undergoes varying degrees of bone resorption following the loss of teeth. The use of conventional dentures for prosthetic rehabilitation only, aggravates this problem. This has led to the search for different

treatment options that would have a milder impact on the jaw bone (Cawood & Howell 1988 and Stellingsma et al., 2004).

The introduction of dental implants has offered new grounds for oral rehabilitation. Removable or fixed prosthesis depending on dental implants for their support and /or retention have been developed since then. Dental implants have an intimate relation

* Assistant Lecturer of Oral Surgery, Faculty of Oral and Dental Medicine, Cairo University.

** Professor of Oral Surgery, Faculty of Oral and Dental Medicine, Cairo University.

*** Professor of Oral Radiology, Faculty of Oral and Dental Medicine, King Abdul-Aziz University.