THE USE OF TWO DIFFERENT GUIDED BONE MEMBRANES WITH BONE SUBSTITUTE FOR IMMEDIATE DENTAL IMPLANTS

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بسم الله الرحمن الرحيم

((وعلمك ما لم تكن تعلم وكان فضل الله عليك عظيماً))

صدق الله العظيم

سورة النساء الاية 113

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أستاذ و رئيس قسم جراحة الفم والفكين

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٢-٥ باللغة الأجنبية (Absract):

(key word: Fisiograft, absorbable collagen membrane, upper anterior teeth)

A total of 12 Implant Direct's Screw Plant ™ implants * were paced immediately after teeth extraction in 12 medically free patients.

From the obtained results, we can conclude that:

1. The use of Fisiograft material as a graft or bone substitute in conjunction with immediate implants in fresh extraction sockets has been reduce the expected rate of vertical crestal bone resorption around the immediately placed dental implants.
2. The bone quality in the form of better mineralization was improved and went to close the density of natural bone when Fisiograft gel used as a graft material to fill the gap around the immediate dental implants.
3. Loading the implants did not affect implant stability and it contributed to increase in crestal bone density in both groups I and II in one, two and three month's interval after loading.
4. The use of the resorbable collagen membrane with immediately placed dental implants resulting in comparable promising results but was significantly lower than that with Fisiograft gel group.

LIST OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

A dental implant is a biomaterial surgically inserted into the alveolar ridge of the jaws for functional and/or cosmetic purposes [(1)]. It is the "tooth root" analogue and is often referred to as a "fixture" [(2)]. Dental implants provide studs to which prosthesis can be fixed [(3)], and usually restricted to patients with completed craniofacial growth [(4)].

Dental implants are effective in the treatment of complete and partial edentulism with high rate success and long-term stability [(5, 6)]. In fact, they are used routinely to support dental and craniofacial restorations [(7)].

According to Bilhan [(8)] endosseous implant-based prosthesis are successful, effective and predictive devices for replacing missing teeth. In fact, replacement of missing teeth by means of endosseous dental implants has become an important and fundamental part of dentistry [(9)].

The goal of modern modalities in dentistry is to have patients with normal contour, function, comfort, aesthetics and speech. The replacement of lost natural teeth by osseointegrated implants represents one of the most significant advances in restorative dentistry that serves to achieve this goal [(10)].

Maintaining bone quality and quantity in the alveolar ridge during and after tooth removal is critical for assuring good aesthetic and functional results and minimizing the need for grafting procedures prior to implant

placement [11]. Following tooth extraction, bone remodelling usually takes place with the final outcome of alveolar bone reduction in both height and width which may results in difficult surgical or restorative prognosis [12].

The placement of immediate implants prevents bone resorption and preserves the alveolar crest at the extraction site [13]. Immediate implantation also offers better aesthetic results and reduces the number of surgical sessions needed [14, 15].

These benefits are associated by a major drawback due to the lack of adaptation between the bone and the implant surface in the coronal portion, which may alter the immediate stability of the immediate implant and can be occupied by epithelial cells, which induce fibro-integration and thus failure of osseointegration [16, 17].

In an attempt to preserve alveolar bone prior to implant placement and to fill the peri-implant space, various bone graft materials have been used immediately following tooth extraction for these purposes [18,19].

Intense researches are currently underway to synthesize new biologic materials that may enhance bone regeneration. Fisiograft (synthesized polylactic-polyglycolic co-polymer) with its three different forms “sponge, powder, and gel form” are available, and can be adapt to the variety of cases which require filler for the eventual formation of new bone [20].