EVALUATION OF PLATELET RICH GROWTH FACTORS IN TRANS-ALVEOLAR SINUS LIFTING USING RESONANCE FREQUENCY ANALYSIS IN PARTIALLY EDENTULOUS MAXILLA

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Dedication

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INTRODUCTION

Edentulism and partial edentulism among elderly patients demands treatment with removable complete denture prostheses or removable partial denture prostheses (RPDPs). Preserving natural teeth to support RPDPs leads to minimize residual alveolar bone loss, maintains periodontal proprioception and increases retention of the denture base.

In distal extension cases RPDs have the potential of accentuating lateral and rotational stresses which exceed the range of tissue tolerance. Thus, distal extension RPD could potentially be harmful to the periodontal tissue of the abutments especially when exposed distal torque.

Placing dental implants distally for additional support will increase prosthesis stability and will reduce the stress on the remaining teeth. So, it seems reasonable to keep the remaining teeth and to insert a minimal number of implants in strategically important positions.

When rehabilitating partially edentulous maxilla with an implant retained removable partial denture the clinician is confronted by many challenges including the poor bone quality and quantity due to bone resorption and maxillary sinus expansion following extraction those impeding proper implant placement.

So, sinus augmentation procedures were advocated to overcome the reduced bone quantity. However, with such approach several drawbacks arise as the risk of sinus membrane perforation and the long healing period that delays the prosthetic rehabilitation phase.

The recent innovations in the field of oral surgery and newly introduced autologous preparations as platelets concentrates used in conjunction with the sinus grafting materials lead to improved outcome of such procedures, however their exact potentials still under investigations.

Thus, this thesis is prompted to answer the question, whether the addition of the platelet rich growth factors in conjunction with the sinus grafting material before implant insertion will aid in attaining sufficient stability of the dental implant faster, Thus, shortening the treatment period needed to achieve adequate osseointegration before prosthetic loading?

REVIEW OF LITERATURE

I. EDENTULISM

Edentulism is a state of partial or complete loss of teeth. A person may lose one or more but not all teeth and becomes partially edentulous or may lose the whole set of natural teeth and becomes completely edentulous. Studying the aging population in western countries revealed an increasingly unexpected rate of edentulism. However, marked decrease in the number of edentulous patients was reported worldwide especially those who are completely edentulous. [1]

*Impact of edentulism:

According to the literature, age is related directly to every indicator of tooth loss.[2,3]

Worldwide aging of population and the rapid development and evolution of the oral health related maintenance and prevention policies contributed to the reduction of numbers of completely edentulous individuals, meanwhile increasing the numbers of the partially edentulous individuals.[4]

Maxillary partial edentulism is one of the most common occurrences in dentistry, 20%to 30% of adult partially edentulous populations older than 45 years of age are missing maxillary posterior teeth in a quadrant, and 15% of this age group is missing maxillary dentition in both posterior regions. [5]