شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائق الاصلية تالفة

بالرسالة صفحات لم ترد بالاصل

EVALUATION OF BIOACTIVE GLASS IN MAXILLARY SINUS LIFTING PROCEDURE

Thesis

SUBMITTED TO
The Oral Surgery Department
Faculty of Oral and Dental Medicine
Cairo University

In Partial fulfillment for the Requirements
of the Master Degree
in Oral Surgery

BY:
Medhat Yehya Gheoneim
B.D.S Cairo
National Cancer Institute
Cairo Univ.

2000

SUPERVISORS

Dr. FAROUK ABDEL AZIM
Assoc. Prof. Of Oral Surgery
Oral Surgery Department
Faculty of Oral and Dental Medicine,
Cairo University

Dr. KHALED ALLAM
Assoc. Prof. Of Oral Surgery
Oral Surgery Department
Faculty of Oral and Dental Medicine,
Cairo University

Dr. KHALED ALLOUBA
Lecturer Of Oral Radiology
Oral Radiology Department
Faculty of Oral and Dental Medicine,
Cairo University

2000

Dedicated to my family

Acknowledgement

I would like to express my sincere gratitude and appreciation to my professors ***Dr. Farouk Abdel-Azim*** *(Assoc. Prof. Of Oral Surgery Faculty of Oral and Dental Medicine, Cairo University) and* ***Dr. Khaled Allam*** *(Assoc. Prof. Of Oral Surgery Faculty of Oral and Dental Medicine, Cairo University) for their generous supervision and unlimited interest in this research and to whom I owe the learning of the surgical skills of the sinus lift procedure and their wonderful criticism that made me aware of the responsibilities of the scientific research.*

I am much obliged to ***Prof. Dr. Galal El-Behairy*** *(Prof. Of Oral Surgery Faculty of Oral and Dental Medicine, Cairo University) for his kind and valuable sharing in one of the cases in this research .*

I would like to express my sincere thanks to ***Dr. Khaled Alouba*** *(Lecturer of Oral Radiology, Faculty of Oral and Dental Medicine, Cairo University) for his supervision and the effort he did with me in this research.*

I would like to express my heart felt thanks and sincere gratitude to ***Dr. Mushira M. Dahaba****, (Assoc. Prof. Of Oral Radiology, Faculty of Oral and Dental Medicine, Cairo University) for her great help to accomplish this work.*

I would like to express my sincere thanks to ***Dr. Mohamed Srougy*** *(Lecturer of Oral radiology Faculty of Oral and Dental Medicine, Cairo University) for his help during the follow up period of the cases.*

I would like to express my sincere thanks and gratitude to ***Dr. Tarek Hosny*** *(Assoc. Prof. Of Prosthodontics, Faculty of Oral and Dental Medicine, Cairo University) for his unlimited help and full interest to accomplish the prosthodontic work for all the cases in this research.*

I will not forget the sacrifices of my family in helping me to accomplish this research.

I would like to thank all the patients involved in this research for their responsible commitment to attend in the follow up intervals.

Contents

INTRODUCTION

Introduction

During the past decade, implants have become one of the most exciting and rapidly developing topics in dental practice as they provide a proper treatment alternative to Conservative prosthodontics in the mandible. Endosseous implants for rehabilitation of partially or fully edentulous patients has proved to be a successful treatment. In the posterior region of the maxilla, however, anatomical limitations (such as deficiency of maxillary alveolar bone and increased pneumatization of the maxillary sinuses, still constitute a challenging problem.

Maxillary sinus lifting became one of the very popular methods for augmentation of the posterior maxilla especially when there is a decrease in inter arch space where other methods as (eg.: onlay grafting) couldn't be used.

Various materials were used to augment the maxillary sinus such as autogenous bone (iliac crest, mandible, maxillary tuberosity) or allogenic grafts as demineralized freeze dried bone, hydroxyapatite, deprotinized bouvine bone or bone morphogenic protein. The Autogenous grafts had the limitations of morbidity of the donor site. Patient's need for a second operation and general anesthesia as well as disease transmission. Other synthetic grafts have the problem of high cost and being not easy to obtain.

In this study Bioactive glass is to be evaluated in maxillary sinus lifting procedure based on the researches proving it as a biocompatible space filler in extracted sockets and large cystic cavities and its osteoconductive property and being not derived from human or bouvine origin. So it is predicted that the potential transmission of viral or donor related diseases is eliminated.

REVIEW OF LITERATURE

Review of Literature

Maxillary sinus lifting. ***Historical Background.***

In the past, maxillary antral floor has been regarded as a structure not conducive to bone augmentation and violation to this anatomic area has been scrupulously avoided in most minor maxillary oral surgical procedures. Recent studies, however have indicated that bone can be stimulated to form in the antral floor by various technical and surgical procedures and by certain forms of stress stimulation imposed on the alveoler ridge structure.[4]

The intrusion of teeth or the imposition of other forms of surgical or physiologic stimuli to the maxillary alveolar ridge caused reaction bone to immediately form in the antral floor even though the stimulous has been applied several millimeters away from the sinus membrane and the antrum. [4]

Proliferation of bone will continue while the intrusive pressure has ceased. At that time remodeling occurs and gradual resorption of the induced antral bone follows. [4]

It has also been shown that the placement of solid pieces of bone as graft material in the extraction alveolus of the posterior maxilla stimulated the antral floor to form bone in an apparent response to the