

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 على هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار %٤٠-٢٠ منوية ورطوية نسبية من ٢٥-١٠ منوية ورطوية نسبية من ٢٠-٤٠ To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%



بعض الوثائـــق الاصليـة تالفـة



بالرسالة صفحات لم ترد بالاصل

EVALUATION OF THE FACIAL GROWTH AFTER TREATMENT WITH THREE DIFFERENT MYOFUNCTIONAL APPLIANCES IN CLASS II DIVISION 1 MALOCCLUSION

THESIS
SUBMITTED TO THE FACULTY OF ORAL AND DENTAL
MEDICINE
CAIRO UNIVERSITY

IN

PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
THE DOCTOR DEGREE IN DENTAL SCIENCE (ORTHODONTICS)

BY

KHALED HAZEM ATTA

B.D.S. (CAIRO 199) M.SC (CAIRO 199)

FACULTY OF ORAL AND DENTAL MEDICINE

CAIRO UNIVERSITY

(2001)

المرابعال

277

2Mr

SUPERVISORS

PROF. DR. EHAB EL-KATTAN

PROFESSOR OF ORTHODONTICS

FACULTY OF ORAL AND DENTAL MEDICINE

CAIRO UNIVERSITY

PROF. DR. MOUCHIRA SALAH EL-DIN

PROFESSOR OF ORAL RADIOLOGY
FACULTY OF ORAL AND DENTAL MEDICINE
CAIRO UNIVERSITY

DR. AMR H. LABIB

ASSOCIATE PROFESSOR OF ORTHODONTICS
FACULTY OF ORAL AND DENTAL MEDICINE
CAIRO UNIVERSITY

ACKNOWLEDGEMENT

Acknowledgement

I would like to express my sincere gratitude's, heartful thanks and grateful appreciation to *Prof. Dr. Ahmed Abd El-Salam Eid*, chairman of Orthodontic Department, Faculty of Oral and Dental Medicine, Cairo University, for his immeasurable support, endless encouragement and fatherly advice.

I wish also to express my grateful thanks to *Prof. Dr. Ehab El Kattan*, Prof. Of Orthodontics, Faculty of Oral and Dental Medicine, Cairo University, for his kind help and co-operation through the preparation of this study. It was a great honor to work under his guidance and supervision.

My profound gratitude is expressed to *Prof. Dr. Mouchira*Salah El-Din, Prof. Of Oral Radiology, Faculty of Oral and Dental Medicine, Cairo University, for her devoted effort, great assistance, and for extending all the facilities throughout the whole work.

My deepest thanks and grateful appreciation are extended to **Dr. Amr H. Labib**, Associate Prof. of Orthodontics, Faculty of Oral and Dental Medicine, Cairo University, for his valuable advice, constructive criticism, devoted effort, and faithful supervision.

I am pleased to express my deep appreciation to *Prof. Dr Adel*Salah El-Din, Prof. Of Quality Control in Textile Department, Faculty of Engineering, Alexandria University, for his kind help and giving a lot time in performing the statistical analysis.

I am also grateful to *Eng. Sherif Shawki*, computer engineering for developing the program utilized in interpretation of the tomographic images.

Content

List of Figures	i
List of Tables	viii
Introduction	1
Review of Literature	3
Aim of the study	58
Material and Method	59
Results	97
Discussion	178
Summary and Conclusion	193
Recommendation	195
References	106

LIST OF FIGURES

Figure	Page
Fig. (1): Articular disc, fossa, and condylar (lateral view)	42
Fig. (2): The sagittal plane of the articular disc	42
Fig. (3): The frontal plane of the articular disc	43
Fig. (4): An intra-oral photograph for the frontal side showing	63
the Andresen plate in place	
Fig. (5): An intra-oral photograph for the right side showing the	63
Andresen plate in place	
Fig. (6): An intra-oral photograph for the left side showing the	64
Andresen plate in place	
Fig. (7): An intra-oral photograph for the frontal side showing	65
the Mono-Block appliance in place	
Fig. (8): An intra-oral photograph for the left side showing the	65
Mono-Block appliance in place	
Fig. (9): An intra-oral photograph for the right side showing the	66
Mono-Block appliance in place	
Fig. (10): An intra-oral photograph for the frontal side showing	67
the Twin-Block appliance in place	_
Fig. (11): An intra-oral photograph for the right side showing	67

the Twin-Block appliance in place	
Fig. (12): An intra-oral photograph for the left side showing the	68
Twin-Block appliance in place	
Fig. (13): Reference points used in functional cephalometric	83
analysis	
Fig. (14): Angular measurements used in functional	84
cephalometric analysis	
Fig. (15): Linear measurements used in functional cephalometric	85
analysis	
Fig. (16) The Scanora multimodal unit used in this study	92
Fig. (17) Patient position on the Scanora	93
Fig. (18) Corrected lateral tomography (Scanora) for the right	94
condyle	
Fig. (19) Corrected lateral tomography (Scanora) for the left	94
condyle	
Fig. (20) Reference lines used in the tomographic analysis	95
Fig. (21) Diagrammatic representation of the tomographic	96
analysis used	
'Fig. (22) Bar chart comparing the mean difference in N-S-Ar	122
for the three groups	
Fig. (23) Bar chart comparing the mean difference in S-Ar-Go	122

for the three groups	
Fig. (24) Bar chart comparing the mean difference in Ar-Go-Me	123
for the three groups	
Fig. (25) Bar chart comparing the mean difference in S-N-A for	123
the three groups	
Fig. (26) Bar chart comparing the mean difference in S-N-B for	124
the three groups	
Fig. (27) Bar chart comparing the mean difference in A-N-B for	124
the three groups	
Fig. (28) Bar chart comparing the mean difference in S-N-Pr for	125
the three groups	
Fig. (29) Bar chart comparing the mean difference in S-N-Pr for	125
the three groups	
Fig. (30) Bar chart comparing the mean difference in S-N-Mp	126
for the three groups	
Fig. (31) Bar chart comparing the mean difference in N-S-Gn	126
for the three groups	
Fig. (32) Bar chart comparing the mean difference in U1-SN for	127
the three groups	
-	127
the three groups	

Fig. (34) Bar chart comparing the mean difference in S-N for the	128
three groups	
Fig. (35) Bar chart comparing the mean difference in S-Ar for	128
the three groups	
Fig. (36) Bar chart comparing the mean difference in S-Go for	129
the three groups	
Fig. (37) Bar chart comparing the mean difference in N-Me for	129
the three groups	
Fig. (38) Bar chart comparing the mean difference in Man-Base	130
for the three groups	
Fig. (39) Bar chart comparing the mean difference in U1-N Pog	130
for the three groups	
Fig. (40) Bar chart comparing the mean difference in L1-N Pog	131
for the three groups	
Fig. (41) Frontal view of patient treated with Twin-Block	132
appliance (pretreatment)	
Fig. (42) Frontal view of patient treated with Twin-Block	132
appliance (post treatment)	
Fig. (43) Profile view of patient treated with Twin-Block	133
appliance (pretreatment)	
Fig. (44) profile view of patient treated with Twin-Block	133