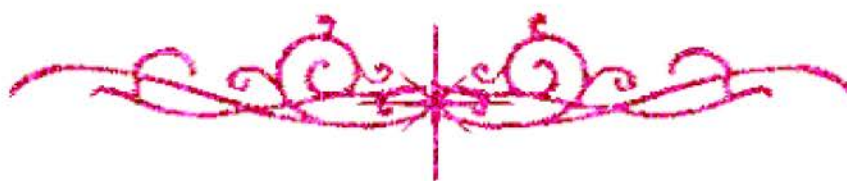


سامية محمد مصطفى



شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



سامية محمد مصطفى



شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



سامية محمد مصطفى



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



سامية محمد مصطفى



شبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة



سامية محمد مصطفى



شبكة المعلومات الجامعية



بالرسالة صفحات لم ترد بالأصل



COLOR DOPPLER SONOGRAPHY IN ASSESSMENT OF MENTAL ARTERY BLOOD FLOW

Thesis

*Submitted for partial fulfillment of the requirements for
Master degree of Oral Medicine, Periodontology and Oral
Radiology.*

By:

د. ٢٩ طارق منيلوي

HAZEM M. ADEL MARZOUK

د/ هاجم العززي

B.D.S. (Cairo Univ.), 2000

Resident, Oral Radiology Department

Faculty of Oral and Dental Medicine

Cairo University

2005

B
15701

طارق منيلوي



SUPERVISORS

Dr. SOAD MAHMOUD ALI MANSOUR

Assoc. Prof., Oral Radiology Department
Faculty of Oral and Dental Medicine, Cairo University.

Dr. HATEM MOHAMED EL-AZIZI

Lecturer, Radiodiagnosis Department
Faculty of Medicine, Cairo University.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

"رَبَّنَا لَا تُزِغْ قُلُوبَنَا بَعْدَ

إِذْ هَدَيْتَنَا

وَهَبْ لَنَا مِنْ لَدُنْكَ رَحْمَةً

إِنَّكَ أَنْتَ الْوَهَّابُ"

صَدَقَ اللَّهُ الْعَظِيمُ

(آل عمران : 8)

DEDICATION

*To the Soul of my
Father,...*

*I owe him my-
self and
To my beloved
Mother.*



ACKNOWLEDGEMENT

Prays and Thanks are to Allah, without whose guidance and will, this work would not grow a reality.

I will never find words that express my grateful appreciation and deep thanks to my decent supervisor Associate professor Dr. Soad M. Mansour, Associate professor of Oral Radiology, Oral Radiology Department, Faculty of Oral and Dental Medicine, Cairo University; for her supreme effort; her marvelous bigheartedness; her precious step-by-step supervision and for her eternal support and encouragement.

My deepest sincere gratitude is of no way enough to appreciate my teacher Dr. Hatem M. El-Azizi, Lecturer of Radiology, Radiodiagnosis Department, Faculty of

Medicine, Cairo University; for his splendid cooperation, infinite generous teaching power and for the time he friendly devoted throughout this work.

I would like to express by deep admiration and respect to Professor Dr. Adel M. Zein El-Abiden, Professor and chairman of Oral Radiology Department, Cairo University, for his kind cautious support and his nonstop encouragement.

My meaningful appreciation and thanks is extended to Prof. Dr. Mohammed El-Sherbiny for his friendly generous advices and for his cooperative help in presenting this work.

My honest thanks should be uttered to all the staff members and technicians of the Radiodiagnosis Department, Faculty of Medicine, and the staff members of Oral Radiology Department, Faculty of Oral and Dental Medicine Cairo University for their generous help for facilitating this work.

LIST OF CONTENTS

	Page
List of Tables	iv
List of Figures.....	v
Chapter I	
INTRODUCTION.....	1
Chapter II	
LITERATURE REVIEW.....	5
Anatomy of the Mandible.....	5
Structures related to the Mandible.....	8
Facial Artery.....	11
Common Carotid Artery.....	13
External Carotid Artery.....	16
Maxillary Artery.....	19
Inferior Alveolar Artery.....	23
Healing of oral wounds.....	25
Atherosclerosis.....	28
Atherosclerosis risk factors.....	33
Ultrasound.....	38
Historical background.....	38
Applications in Dentistry.....	41
The characteristics of sound.....	43
Ultrasound properties.....	43
Basic components of sonic imaging system.....	44
Transducers.....	45
Ultrasonic display.....	47
Doppler Ultrasound systems.....	51
The Doppler effect.....	52

Doppler display.....	54
Continuous and pulsed wave instruments.....	56
Duplex instruments.....	58
Color Doppler imaging.....	58
Power Doppler imaging.....	59
Information from Doppler signals.....	60
Structure of the arterial wall.....	61
Feature of blood flow.....	61
Changes affect the arterial flow.....	63
Wave form indices.....	63
Sonographic features of blood flow.....	65
Doppler artifacts.....	66
Hazards of diagnostic ultrasound.....	69
Chapter III	
AIM OF THE STUDY.....	72
Chapter IV	
JUSTIFICATION OF THE STUDY.....	73
Chapter V	
MATERIAL AND METHODS.....	74
Criteria of patients' selection.....	74
Patients' interview.....	75
Clinical examination.....	75
Sonographic examination.....	76

Machine start-up setting.....	77
Sonographic procedures.....	78
External Carotid artery examination.....	78
Mental artery examination.....	79
Statistical methods.....	82
Chapter VI	
RESULTS.....	83
Chapter VII	
DISCUSSION.....	101
Chapter VIII	
SUMMARY and CONCLUSION	109
Chapter IX	
RECOMMENDATION.....	113
Chapter X	
REFERENCES.....	114
Chapter XI	
APPENDICES.....	132

LIST OF TABLES

Table 1: The comparison between the atherosclerotic group and the control group.....	84
Table 2: The correlation between age and both MA & ECA indices within the atherosclerotic group.....	86
Table 3: The correlation between age and both MA & ECA indices within the control group.....	89
Table 4: The correlation between age and both MA & ECA indices within the whole cases.....	92
Table 5: The correlation between MA & ECA indices within the atherosclerotic group.....	95
Table 6: The correlation between MA & ECA indices within the control group.....	97
Table 7: The correlation between MA & ECA indices for whole cases.....	99