

بسم الله الرحمن الرحيم



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



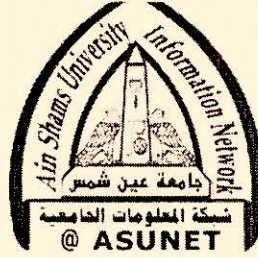
شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

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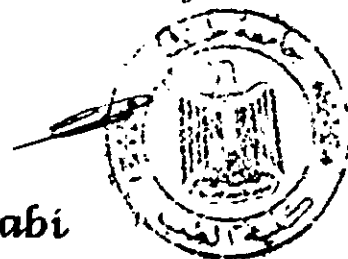
ULTRASONOGRAPHIC DIAGNOSIS OF ORBITAL MASSES

Thesis

Submitted in Partial Fulfilment of the Requirements of the
Master Degree in
"Radiodiagnosis"

By

Gamal Ahmed Hamza Shalabi
(M.B.B.Ch.)



SUPERVISORS

Prof. Dr.

MAHMOUD ABDEL AZIZ DAWOUD

Professor and Head of Radiology Department
Faculty of Medicine
Tanta University

Dr.

HAMDI MOSTAFA KAMEL

Assitent professor of Ophthalmology
Faculty of Medicine
Tanta University

Dr.

ATEF HAMMAD TEIMAH

Lecturer of Radiodiagnosis
Faculty of Medicine
Tanta University

ف-ع-ص
Cp

FACULTY OF MEDICINE
TANTA UNIVERSITY

2000

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا

إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ﴾

صدق الله العظيم

٣٢ (البقرة)

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INTRODUCTION



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High frequency ocular sonography is the ideal method for imaging the eye and intraocular structures in the presence of opaque ocular media complete view of the fundus may be impossible ophthalmoscopically and in these cases sonography is valuable. Although high field strength MR imaging with surface coils provides excellent detail of normal and pathologic ocular structures major short comings are lack of spatial resolution and poor specificity with certain lesions. Sonography is superior to CT or M R imaging in detecting ocular lesions such as small melanoma that are 2 mm. or less in thickness ^[1].

Orbital sonography has been used in the evaluation of both intra ocular and extraocular masses, localization of foreign bodies detection of retinal/choroidal detachment and measurement of intraocular and orbital tumours and tumours like lesions ^[2-8].

The main advantages of orbital ultrasonography is a non invasive technique , information can be obtained quickly and economically. The eye can be examined dynamically during eye movements , which of value in localizing abnormalities of different pathologic conditions ^[9]. The two basic ultrasound techniques in use are A-scan & B-scan. A-Scan provides information regarding a lesion's character, size. B-scan is atwo dimensional image provides information primarily about the topographical nature of intraocular, orbital structures, lesions and about thier motility characteristics ^[8,10,11].

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AIM OF THE WORK



AIM OF THE WORK

The aim of this work is to evaluate the role of ultrasonography in diagnosis of orbital masses in correlation with CT scanning and histo-pathological examination.

REVIEW OF LITERATURE



REVIEW OF LITERATURE



REVIEW OF LITERATURE

ANATOMICAL CONSIDERATION

I- ANATOMY OF THE ORBIT

A) Bones:

The orbit is an irregular pyramidal cavity in which the eye ball rotates, the pyramid has an apex located posteriorly and to the medial side and a base that opens forward on the face consequently, the orbit has a roof, floor, medial and lateral walls all of which are approximately triangular ^[12] {Figure 1}.

- * The orbital roof is mainly formed by the orbital plate of the frontal bone, and the lesser wing of the sphenoid bone posteriorly and the zygomatic bone in front .
- * The lateral wall of the orbit is formed by the sphenoid and zygomatic bones, which separate the orbital cavity from the temporal fossa.
- * The medial wall is formed by 4 bones from anterior to posterior:
 - The frontal process of the maxilla.
 - The lacrimal bone.
 - The orbital plate of the ethmoid (lamina papyracea)
 - The body of the sphenoid.

The medial wall is the thinnest of the orbital walls ^[12] {Figure 2}.

The optical canal is about 4 mm. in diameter. It lies at the most posterior part of the medial wall, and transmits the optic nerve and ophthalmic artery ^[13]

- * The floor of the orbit is formed by the orbital surface of the maxilla, with the zygomatic bone anteriorly and the orbital process of the