

# بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ



HOSSAM MAGHRABY



# شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم  
قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



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بعض الوثائق

الأصلية تالفة



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بالرسالة صفحات

لم ترد بالأصل



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B 12714



*Congenital Glaucoma:  
Diagnosis and Management*

THESIS

Submitted in Partial Fulfillment of the Requirements  
for the MD Degree in Ophthalmology

By

*Gamal El-Deen Rashed Othman*

*M.B.B.Ch; M.Sc. (Assiut)*

Assistant Lecturer of Ophthalmology

Supervised by

**Prof. Salah A. Hassan**

*Professor of Ophthalmology*

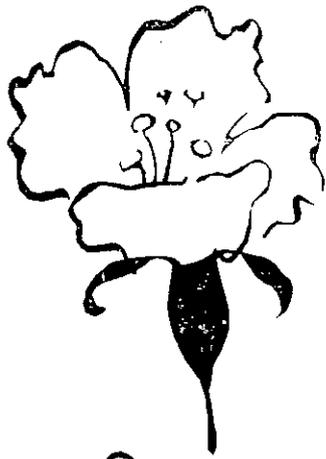
*Faculty of Medicine, Assiut University*

**Prof. Abd El-Tawab A. Ahmed**

*Professor of Ophthalmology*

*Faculty of Medicine, Assiut University*

**Faculty of Medicine - Assiut University  
1997**



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَعَلَّمَكَ مَا لَمْ تَكُن تَعْلَمُ  
وَكَانَ  
فَضْلَ اللَّهِ عَلَيْكَ عَظِيمًا

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



*To My Late Father,  
"My First Teacher in Life"*

*To My Mother,  
"My First Love"*

*To My Wife,  
"My Source of Inspiration,  
Love and Encouragement"*



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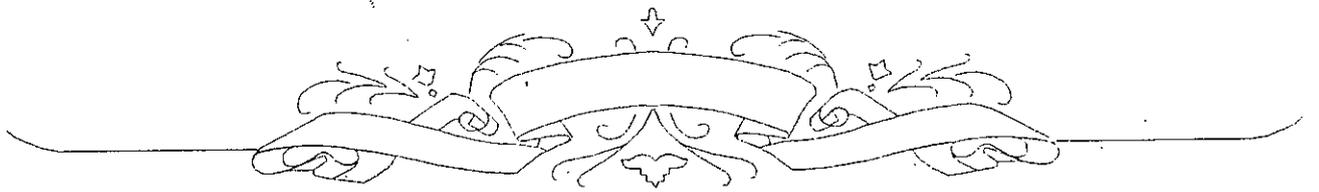
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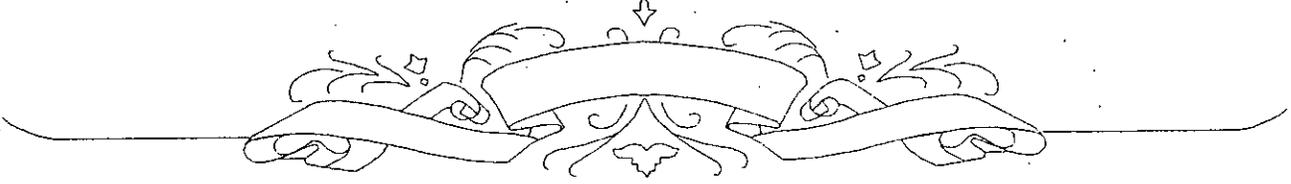
# INTRODUCTION AND AIM OF THE WORK



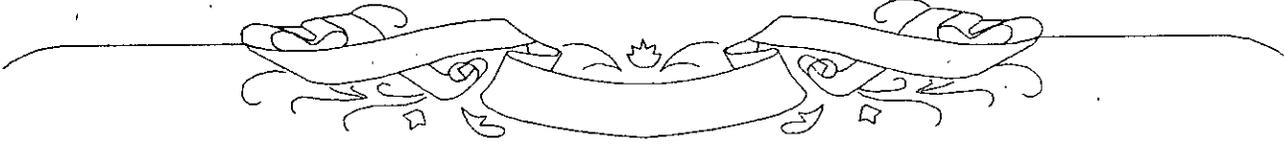
## **INTRODUCTION AND AIM OF THE WORK**

Congenital glaucoma presents one of the greatest clinical challenges to the ophthalmologist. Children with congenital glaucoma were seen in a great number in the outpatient clinic of Assiut University Hospital (AUH). Trabeculectomy was the main surgical procedure, but the failures after surgery were common. Little hope of preserving sufficient sight to permit the earning of a livelihood could be held out for children suffering from congenital glaucoma.

The aim of the present study was systematic evaluation of congenital glaucomas, and the search for the proper surgical technique.



**RIVIEW OF  
LITERATURE**



## **REVIEW OF LITERATURE**

### **Normal development of the angle of the anterior chamber:**

At an early stage of gestation, the apex of the anterior chamber (AC) was located far anterior to Schlemm's canal and the ciliary muscles were inserted into the trabecular area. As gestation advances, the apex of the angle and the insertion of ciliary muscles shifted gradually backwards. At 42 weeks of gestation, the apex of the angle reached a level at the posterior edge of the canal and ciliary muscles entered the scleral spur. The trabecular area of an infant of 24 weeks' gestation consisted of cells (future endothelial cells), arranged in a most irregular fashion and a small amount of extracellular substances. The trabecular sheets then appeared at the AC side of the trabeculum and the sheets gradually increased closer towards Schlemm's canal. At 32 weeks of gestation, the trabecular sheets formed over as much as one half of the trabecular meshwork. The outer half of the trabecular meshwork, however, was still unorganized and contained irregularly arranged cells. The trabecular meshwork at 42 weeks of gestation was similar to that seen in adults, leaving only a few layers of cells in endothelial meshwork at the subcanalicular area (Tawara and Inomata, 1981).

**Definition of congenital glaucoma:**

Glaucoma that occurs during the first 3 years of life is broadly classified as 'infantile glaucoma'. The more commonly used term 'congenital glaucoma' implies that disease is present at birth, which may be true pathologically in most cases. The clinical manifestations of the disease may not be recognizable until some time after birth. So, the term 'infantile glaucoma' seems more appropriate (Deluise and Anderson, 1983).

The term 'congenital glaucoma' usually refers to primary infantile glaucoma, a condition caused by developmental abnormalities of the AC angle. Congenital glaucoma is usually bilateral and presents sometime between birth and 3 years of age (Breen and Ball, 1994).

**Classification:**

There are two types of classification:

I- Syndrome classification:

- A) *Primary infantile glaucoma:* it occurs in the absence of any systemic disease or other ocular conditions (Wagner, 1993).
- B) *Complicated glaucomas:* These occur in patients with associated ocular or systemic abnormalities. A fairly complete listing of these entities would include: microphthalmia, persistent hyperplastic primary vitreous (PHPV),