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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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EFFECT OF IMPLANTATION O CAPSUL RING ON POSTERIOR CAPSULE OPACIFICATION

Thesis

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*Submitted for Partial Fulfillment for
M.D. degree in Ophthalmology*

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By

TAMER IBRAHIM SALEM

M.Sc. in Ophthalmology

Under Supervision of

PROF. ABDALLAH FARAG EL-SAWY

*Professor of Ophthalmology
Benha Faculty of Medicine*

PROF. AYMAN HUSSEIN NASSAR

*Professor of Ophthalmology
Benha Faculty of Medicine*

PROF. TAREK MOHAMMED ZAGHLOOL

*Professor of Ophthalmology
Benha Faculty of Medicine*

DR. HANDY AHMED EL-GAZAR

*Assist. Prof. of Ophthalmology
Benha Faculty of Medicine*

**BENHA FACULTY OF MEDICINE
ZAGAZIG UNIVERSITY**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ قَالُوا سُبْحَانَكَ

لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا ^ص

إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ ﴾

صدق الله العظيم

(سورة البقرة الآية ٣٢)

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AIM OF THE WORK

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To assess the effect of capsular tension ring on posterior capsule opacification.

INTRODUCTION

Posterior capsule opacification (PCO) is the most frequent cause of decreased vision after cataract surgery. Various mechanical, physical, pharmaceutical, and immunologic attempts have been made to prevent PCO by removing or killing lens epithelial cells (LECs). However, none of the methods has satisfactorily been proven to be practical, effective, and safe as a routine clinical procedures (*Apple et al., 1992*).

It is reported that a thick, closed silicone ring implanted in the capsular bag maintained the capsular integrity, and later observed that migrating LECs were significantly inhibited due to compression. Based on their observation and in vitro culture experience, they previously proposed a new concept for PCO prevention by creation of a sharp, discontinuous bend in the capsule (*Hara et al., 1995*).

The histopathologic examination of a human lens capsule containing a plano-convex intraocular lens (IOL), which spontaneously dislocated posteriorly 3 years after cataract surgery and was explanted from the vitreous, revealed that migrating LECs were severely inhibited at the posterior capsular bend created by the plano-convex edge (*Nishi et al., 1996*). It is also observed that human cataract LECs cultured in a well did not grow and climb along the rectangular well wall after they became confluent,