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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

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بالرسالة صفحات لم ترد بالأصل

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SMALL INCISION CATARACT SURGERY BY MANUAL NUCLEAR FRAGMENTATION

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THESIS

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List of Abbreviations

C.B.S.	Capsular block syndrome
C.C.C.	Continuous curvilinear capsulorhexis
C/F	Counting finger
D	Diopter
I.O.L.	Intraocular lens
I.O.P.	Intraocuar pressure
LOCS	Lens opacity classification system
MRT	Against the rule
PAS	Peripheral anterior synechia
PMMA	Polymethyl methacrylate
SIA	Surgically induced astigmatism
WTR	With the rule

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Introduction & Aim of the Work

INTRODUCTION AND AIM OF THE WORK

Modern cataract surgery has evolved from an old operation involving a Graefe Knife and no lens replacement to a fine refractive surgical procedure capable of improving both uncorrected and best corrected visual acuity. With the introduction of the intraocular lens (I.O.L.). and corresponding improvements in prediction of IOL power, the spherical component of the patient's refractive error has become reasonably predictable. This has led to greater expectations by the surgeon and patient for rapid and stable visual rehabilitation following cataract surgery.

The astigmatic component of refractive error following cataract surgery remained the great obstacle to achievement of this goal (Buzard and Shearing, 1991).

With the introduction of small incision sutureless or single suture cataract surgery, the initial success however, was short lived due to the growing popularity of intraocular lens (IOL) implantation. The only available IOL's present at this time were the rigid 7mm optic polymethyl methacrylate lenses. These lenses mandated widening of the small incision for their insertion, thus eliminating all the advantages of the small incision (Lindstrom, 1995).

However, the small incision was soon to be accompanied by its allies-the small optic and foldable intraocular lenses. These lenses required no widening of the cataract incision for their insertion (Tsuboi, 1993).

Small incision surgery was initially performed by sophisticated ultrasonic instrumentation (Pederson, 1990 and Prince et al., 1993) until simple manual nuclear phacofragmentation instruments were introduced (McIntyre, 1995).

Contrary to the expensive and cumbersome ultrasonic phacoemulsification machine the instruments required for manual phacofragmentation are relatively cheap and easily portable. Moreover, the manual phacofragmentation technique maintains all the advantages of the ultrasonic phacoemulsification technique, namely early patient mobilization, limited postoperative astigmatism, rapid visual stabilization, and early patient rehabilitation and return to work (Kansas, 1994).

Due to the sophistication of the ultrasonic phacoemulsification machine the procedure has a very steep learning curve for those who wish to master the technique. Phacoemulsification is also limited to the lower grades of nuclear hardening (Olson, 1991).

Furthermore, it is superior to ultrasonic phacoemulsification in that it is feasible with all grades of nuclear hardening (Kanasas, 1994 and McIntyre, 1995).

Although phacoemulsification is the choice for most surgeons, manual neucleofragmentation also has a place as it maintains all the advantages of small incision surgery and can serve as an intermediate step for surgeons who wish to convert to phacoemulsification (Duch et al., 1996).

AIM OF THE WORK:

The study aimed to assess the safety and efficacy of the relatively new phacofragmentation technique.

All intraoperative difficulties and obstacles as well as postoperative complications were reported and compared to those of phaco fragmentation and phacoemulsification literature.

The astigmatism induced by the frown incision was analyzed at different follow up visits as regards the amount and the meridian,the results were compared to those of other authors who used the frown incision.

Review of Literatures