PHAKIC INTRAOCULAR LENS

Essay
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In
Ophthalmology

By
Rania Nasser Nassif

Supervisors
Prof. Dr. Hany El-Ibiary
Professor of ophthalmology
Faculty of Medicine - Ain Shams University

Dr. Mohamed Abd El-Hakim
Assistant professor of Ophthalmology
Faculty of Medicine – Ain Shams University

Faculty of Medicine
Ain Shams University
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رسالة

توطئة للحصول على درجة الماجستير

في طب وجراحة العيون

مقدمة من

الطبيبة / رانيا ناصر نصيف

تحت إشراف

الأستاذ الدكتور / هانى الإبيارى

أستاذ طب وجراحة العيون

كلية الطب – جامعة عين شمس

الأستاذ الدكتور / محمد عبد الحكيم

أستاذ مساعد طب وجراحة العيون

كلية الطب – جامعة عين شمس

كلية الطب

جامعة عين شمس

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INTRODUCTION

Myopia is a condition in which parallel rays derived from infinitely remote object focus in front of the retina, when the eye is at rest.

The surgical correction of hyperopia, especially for medium to high hyperopic errors, has been a continuous challenge in refractive surgery. A safe, efficient, and predictable refractive surgical technique has been sought as a solution for patients with high hyperopia or induced hyperopia from previously unsuccessful refractive corneal surgery. ***(Alió Jl, Ismail MM, Artola A, Pérez-Santonja JJ. , 1997)***

Myopia is a prevalent ocular disorder. Many methods are used for correction of myopia such as; glasses, contact lenses, radial keratotomy (RK), photorefractive keratectomy (PRK), Laser Assisted in-Situ Keratomileusis (LASIK). Intra stromal Corneal Ring Segments (ISCRS) and surgical Intraocular Lens (IOL) implantation with or without clear lens extraction.

Many patients with high myopia cannot see well with glasses, and their thickness may cause psychological problems. Others cannot tolerate contact lenses. So these patients need other solutions for their myopia.

RK achieves satisfactory results with low myopia not with high myopia. It is not accurate being a manual technique, beside other complications specially weakening of the cornea.

Current techniques of PRK achieve the best results with low and moderate myopia. LASIK is used for correction of the high myopia. These techniques require extensive thinning of the cornea, increasing the risk of corneal ectasia and keratoconus particularly with increased intraocular pressure (IOP). In addition, the optical quality can be deficient in terms of contrast sensitivity.

The (ISCRS) is a new technology for correction of myopia but limited to low degrees.

Clear lens extraction with IOL, implantation is one of the surgical solutions, but has many complications as in cataract surgery.

The outcome of phakic IOL implantation has been rather facorable, with significant improvement in uncorrected visual acuity, and tolerable visual symptoms in terms of glare and halo.

Angle supported IOL for treatment of myopia demonstrated good efficiency during two years of follow up. Long term complications such as iris retraction and endothelial cell loss remain a concern.

The iris-fixated (Fechner-Worst) anterior implant was developed as a modification of Lobster-Claw lens used for

aphakia. Currently the lens is concave, so there is sufficient space between the implant and the corneal endothelium. As it is an iris claw lens, so the angle is free for normal aqueous drainage. One of its important advantages is the reversible techniques as, if indicated, lens removal would be not difficult and not more traumatic than implantation. Generally the phakic implant respects totally corneal architecture. Neither the corneal optical zone nor the corneal positive asphericity are compromised.

The echograms taken by ultrasound biomicroscopy are useful in verifying the intraocular position of the phakic IOL within the anterior chamber (AC).

AIM OF WORK

The aim of this work is to look at the most recent data regarding the risks and hazards of implantation of phakic intraocular lenses and to describe the etiology of such complications and possible management once they arise.

It also displays the efficacy, predictable, stability, and safety of these implants.

It stresses the need for careful preoperative evaluation, patient selection and long-term follow up in order to avoid unnecessary complications.

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