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Surgical options for treatment of residual refractive errors after primary excimer laser refractive surgery

Essay
Submitted For Fulfillment Master
Degree in Ophthalmology
By

Alaa El-Din Taha Rabah Ershi

M.B.B.CH
Under Supervision of

Dr. Hisham Fathallah El-Sheikh

Assistant professor of ophthalmology Faculty of medicine - Cairo University

Dr. Mohamed Sameh El-Agha

Assistant professor of ophthalmology Faculty of medicine - Cairo University

Dr. Amr Abd El-Latif Osman

Lecturer of ophthalmology

Faculty of medicine - Cairo University

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ABSTRACT

Purpose:

- To outline types of residual refractive errors after primary excimer laser refractive surgery.
- To outline methods of diagnosis.
- To outline methods of treatment.
- To determine areas that needs future researches.

Methods:

Medline search and internet search engines on the topics of surgical management of residual refractive errors after primary excimer refractive surgery.

Results:

Residual refractive errors can be managed by different methods. This could be either excimer laser enhancement, contact lens, phakic IOL, INTACS, and penetrating keratopathy.

Conclusions:

Residual refractive errors can be managed both safely and effectively with a wide range of different techniques.

Key Words:

LASIK - PRK- LASEK- INTACS -Keratectasia Residual refractive errors.

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Lists of Abbreviations

AK = Astigmatic keratotomy.

BCVA = Best corrected visual acuity.

BSS = Balanced salt solution

CCT = Central corneal thickness.

CMTF = Confocal microscope through focusing.

DLK = Deep lamellar keratoplasty

FDA = American Food and Drug administration.

GAC = Glycosamine glycan.

HOA = High order aberrations.

INTACS = Intracorneal ring segments.

II = Interleukin

IOL = Intraocular lens.

LASIK = Laser assisted in situ keratomileusis.

LASEK = Laser assisted subepithelial keratomileusis.

OCT = Ocular coherence tomography.

OLCR = Ocular low coherent reflectometer.

PK = Penetrating keratoplasty

PMN = Polymorph nuclear cells.

PRK =Photorefractive keratectomy.

PTK = Phototherapeutic keratectomy.

RGP = Rigid gas permeable

SD = Standard deviation.

SE = Spherical equivalent

TEM = Transmission electron microscopy.

TGF =Transforming growth factor.

UCVA = Uncorrected visual acuity.

US = Ultrasound.

VA = Visual acuity.