

# CATARACT IN HIGH MYOPIA



## HIGH MYOPIA

EXTREME, PATHOLOGICAL, MALIGNANT

➤ AX. LENGTH.

MORE THAN 26.5 mm

➤ ERROR:

MORE THAN :

- -6.00 dpt. in adult
- -4.00 dpt. in children less than 5ys.



## HIGH MYOPIA

HIGH-EXTREME.PATHOLOGICAL, MALIGNANT;

### ➤ POST POLE ABNORMALITIES:

- Temporal peripapillary atrophic crescent, Hage & tilting of optic disc
- Tessellated fundus.
- posterior staphyloma
- Lacquer cracks ,diffuse atrophy, patchy atrophy.
- CNM, macular atrophy ,mac. Hole, Fuch's spot .

## CATARACT IN HIGH MYOPIA

### PROBLEMS

- AGE: EARLIER
- ANISOMETROPIA:  
MS DEVIATION- AMPLYOPIA.
- GLAUCOMA
- CHRONIC CL USE : GPC, C.Vascularization,  
DRY EYE
- RETINAL AND MACULAR PATHOLOGIES

## CATARACT IN HIGH MYOPIA

### LENS OPACITY.

- HIGH MYOPIA IS KNOWN TO BE ASSOCIATED WITH CATARACT.
- Increases risk of posterior sub capsular cataract , an important predictor of cataract surgery.

Myopia and Incident Cataract And Cataract Surgery. The blue Mountain Eye Study

Christine Y. et al. Invest. Ophthalmol.Vis.Sci DEC.2002. 43no 12: 3625-3632

## CATARACT IN HIGH MYOPIA

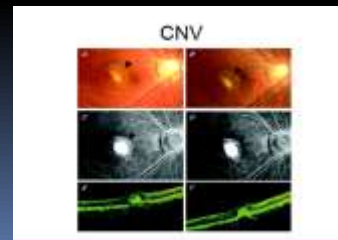
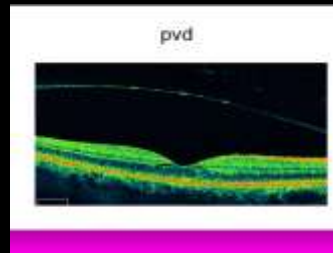
### PREOPERATIVE EVALAUATION

- BCVA
- MS BALANCE
- IOP
- SL: CONJ/ CORNEA/ LENS
- VITROUS.
- RETINA :DISC/MACULA/PERIPHERY

## CATARACT IN HIGH MYOPIA

### PREOPERATIVE EVALUATION:

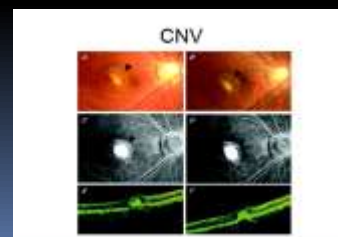
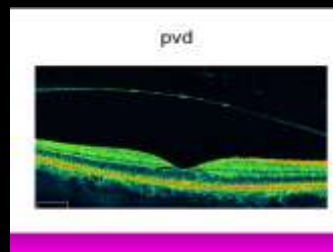
- **TOPOGRAPHY:**  
astigmatism management,  
KCC
- **USG:**  
PVD, post staphyloma.  
Axial length, ACD
- **FFA:**  
CNVs, Mac. scar .
- **OCT:**  
PVD, ERM, F. SCHESIS. CNM
- **BIOMETRY:**



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## CATARACT IN HIGH MYOPIA

### BIOMETRY:

➤ LONG EYES MAY HAVE NORMAL SIZED ANT.SEGMENT!!!

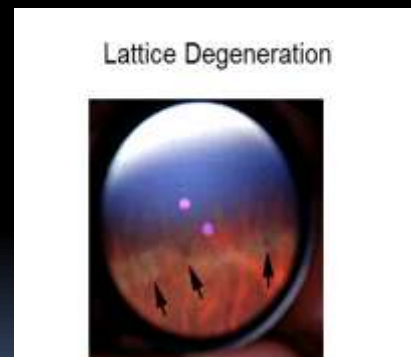
- **IOL MASTER:** most accurate.
- **A SCANE :**

WHICH FORMULA :

- SRK-T.
- Holladay 2 (needs WTW diameter.)

## CATRACT IN HIGH MYOPIA PROPHLACTIC ARGON LASER OR CRYO

- **ACTUAL LESIONS**
  - LATTICE WITH HOLES.
  - = SYMPTOMATIC HORSE SHOE BREAKS!  
BUCKLE !
- **360 DEGREE.**
- **NOTTT:**
  - TTT MAY LEAD TO PVD, ERM .
  - NEW H/S BREAKS MAY OCCUR POST TO TTT OR EVEN TO ENCIRCLING BUCKLE .
- **CLOSE POST OP F/U**



## CATARACT IN HIGH MYOPIA

- OPERATIVE TECHNIQUES
- PHACO
- FLACS

## CATARACT IN HIGH MYOPIA

### Surgical Technique

- Unilateral -bilateral
- ANAESTHESIA
- INCISION
- CAPSULORHEXIS
- PHACOTECH.:
- IOL
- CLOSURE
- ASTIGMATISM MANAGEMENT

## CATARACT IN HIGH MYOPIA

### ANAESTHESIA

- **GENERAL:**  
SAVOFLURANE, laryngeal mask
- **LOCAL :** NEVER RETROBULBAR
  - **PERI BULBAR:**  
ONE INJECTION, SHARP NEEDLE.  
CHECK USG:AX. L., SITE OF POST STAPHYLOMA
  - **SUB TENON**
- **TOPICAL.**

## WHICH IOL!!

### LARGE BAG

- **OPTIC DIAMETER:** 6mm +.
- **MATERIAL:** SOFT Acrylic
- **EDGE DESIGN:** ANT.: ROUND SLOPE  
POST.: SQUARE.
- **OPTIC DESIGN:** BICONVEX.
- **NEVER** - 5 mm PMMA DECENTRATION – PCO  
-- SILCON
- **INTENDED POST OP. REFRACTION**

## CATARACT IN HIGH MYOPIA

### MY PREFERRED SURGICAL TECHNIQUE

- **UNILATERAL**
- **TOPICAL**
- **CCI**
- **5mm.**
- **SOFT**  
Supra CAPSULAR PHACO-ASPIRATION
- **HARD**  
HORIZONTAL CHOPPING
- **Rayner Supraflex**

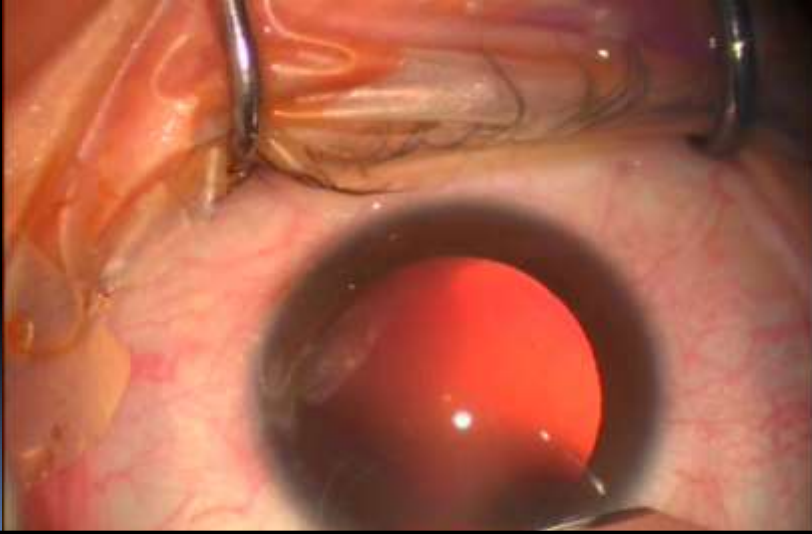
## FOLDABLE RAYNER SUPRAFLEX

- AVH TECHNOLOGY.
- HYDROPHILIC ACRYLIC
- BICONVEX.
- ASPHERIC.
- UPTO -10 dpt
- AMON-APPLE  
ENHANCED  
SQUARE EDGE.
- 6.25 mm
- LEAST SILCON OIL  
DROPLET ADHERENCE

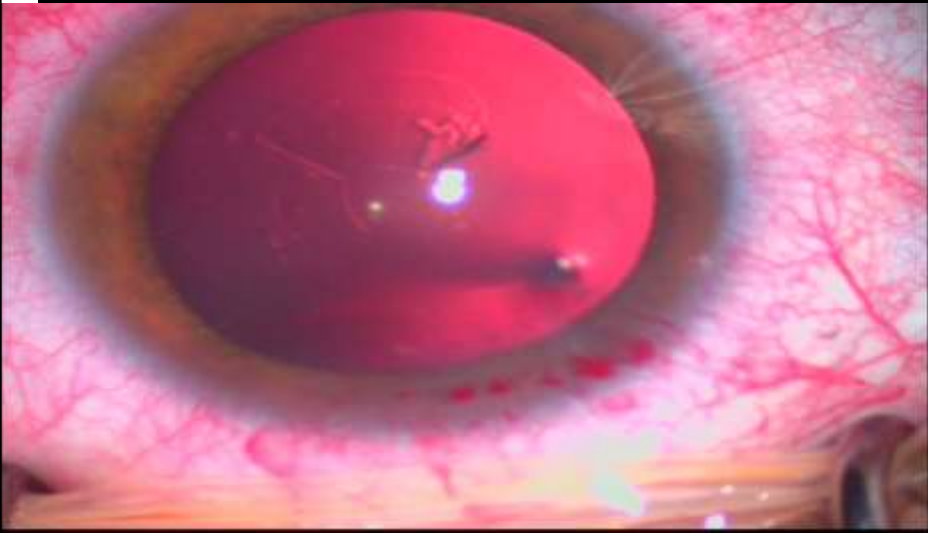


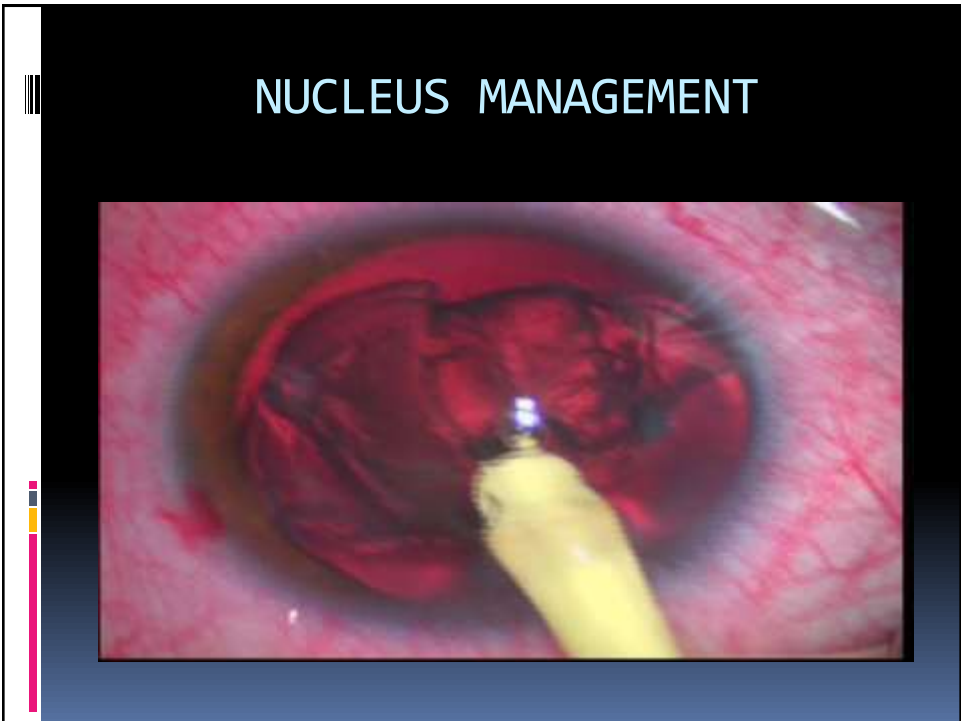
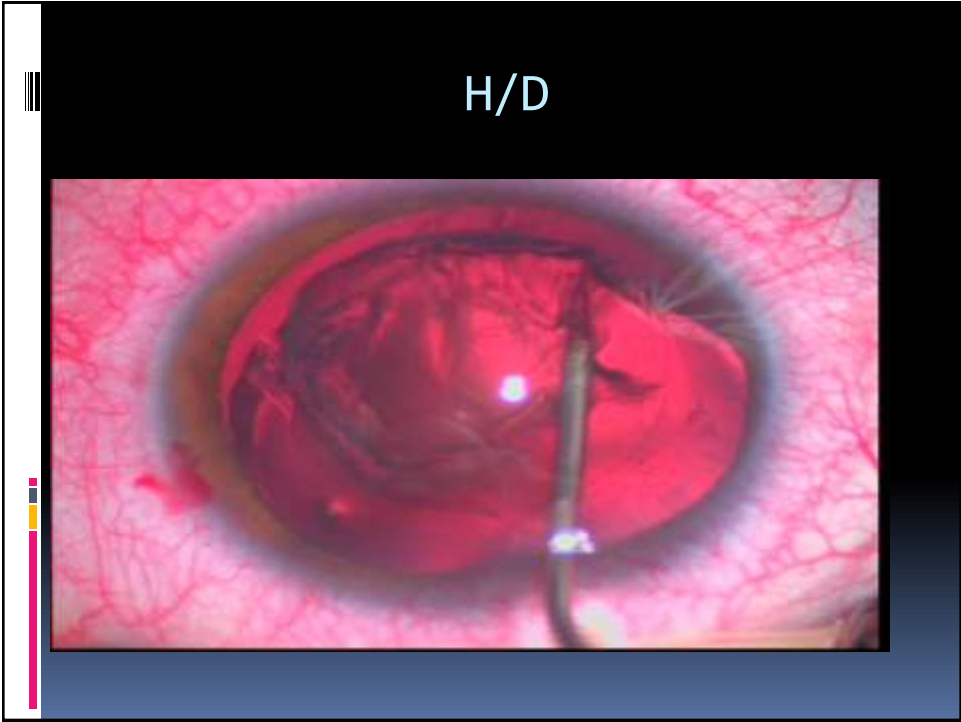


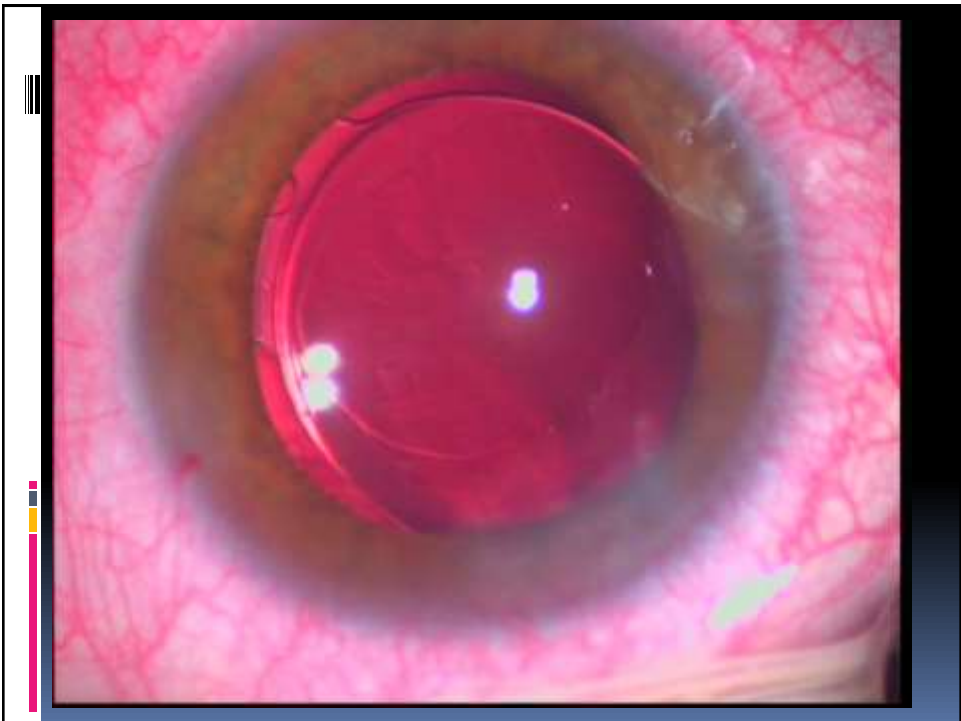
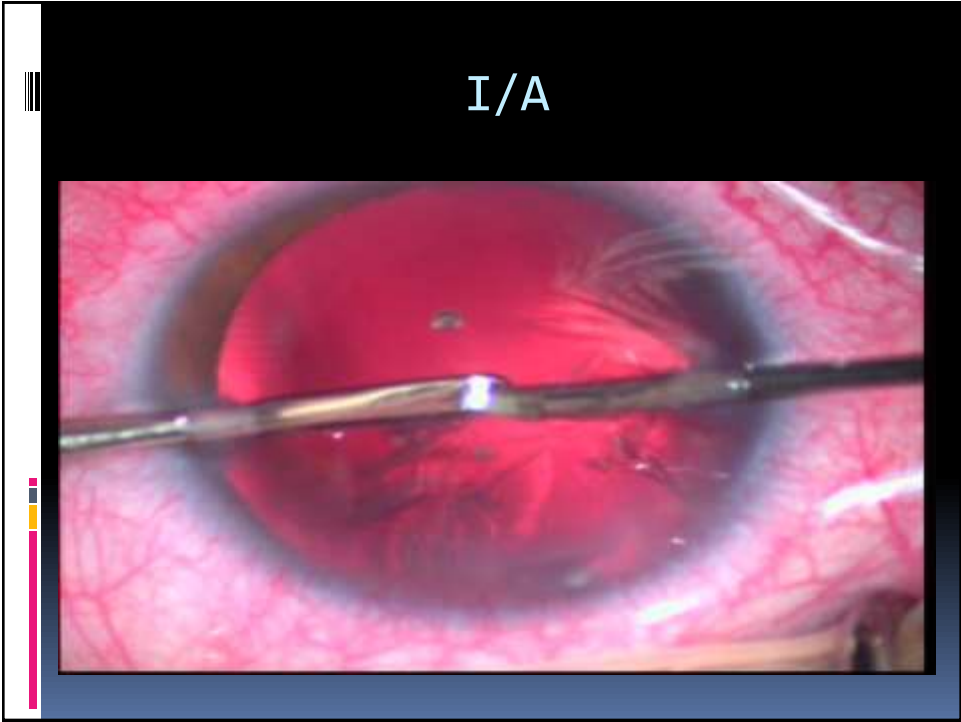
# INTRA OP TIPS INCISION



# CAPSULORHEXIS







## CATARACT IN HIGH MYOPIA

### ASTIGMATISM MANAGEMENT

LRI:

- RANGE: 1.5 -3.00 D.
- PLACED 1.5 mm to limbus
- Use nomogram.



## CATARACT IN HIGH MYOPIA

### ASTIGMATISM MANAGEMENT

#### OCCI :

Corneal astigmatism correction with opposite clear corneal incisions or single clear corneal incision: Comparative analysis

- Journal of Cataract & Refractive Surgery

Volume 32, Issue 9, Pages 1432-1437, September 2006

Sudar Khoshankhar, MD, Pavan Lohiya, MD, Vanathi Murugiesan, MD, Anita Panda, MD:



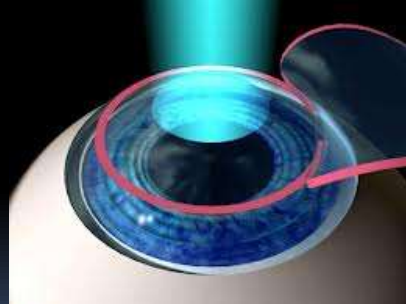
## CATARACT IN HIGH MYOPIA

### ASTIGMATISM MANAGEMENT

### LVC

- HIGH DEGREES
- 2-3 M POST OP.
- PRK-LASIK
- GOAL TO END UP WITH IS

0.5-0,75 D



## CATARACT IN HIGH MYOPIA

### POSTOP. PROBLEMS

- KNOWN TO CATARACT SURGERY

### SPECIAL:

- DIPLOPIA.
- PCO
- RD
- CNVs

## CATARACT IN HIGH MYOPIA

### PROBLEMS

REFRACTIVE SURGERY CAN LEAD TO STRABISMIC COMPLICATION.

OCULAR SURGERY NEWS EDITORIA. DC. 2001.

### IOL DECENTRATION

PRISMATIC EFFECT

CAN DETERIORATE PHORIA INTO TROPIA

## CLE FOR HIGH MYOPIA

### RD:

- 1-8 % .
- VITREOUS MOBILITY, PVD, RET. BREAKS
- RISK IS DECREASED WITH**
- New cataract techniques & IOLS.
- Careful preop. And post op. fundus exam. & TTT of any lesions.
- Patients education of symptoms of PVD

## POSTOPERATIVE PROBLEMS

### PCO

#### **POST CAPSULOTOMY:**

DEC. HYALURONIC ACID. CONCENTRATION

- ***SURGICAL:***

#### ***WHEN !***

- INTRAOP. , POSTOP.

- **YAG:**

SHOCK WAVES, SYNCHESIS, SYNRESIS

***WHEN, TECHNIQUE, RISK OF RD***

## CATARACT IN HIGH MYOPIA

### **RISK REDUCTION PHACO**

#### **TECHNIQUE:**

- SMALL INCISION
- PREVENT AC FLUCTUATIONS
- FOLDABLE IOL
- INTACT POST. CAPSULE

