

***‘THROUGH THE LENS OF
OF TRAUMA:WOODEN
STICK INDUCED
CATARACT AND LENS
DISLOCATION’***

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INTRODUCTION

- Ocular trauma is one of the most common causes of monocular visual impairment and blindness.
- It is frequently associated with crystalline lens changes in the lens resulting from direct penetrating injury to lens or contusion type injury.
- Preparation and planning for any anticipated and unanticipated intraoperative events will serve to maximize both the patients outcome and the surgeon's comfort with the operative procedure

CASE HISTORY

A 44 yr old male presented with accidental history of trauma to right eye with wooden stick at his home,

which led to

- Pain
- Diminution of vision
- Redness &
- Watering in Right eye.

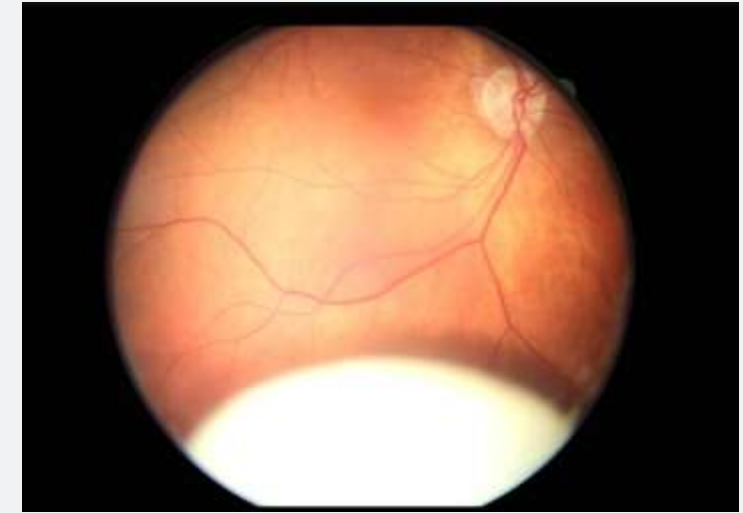
LOCAL EXAMINATION

	Right eye	Left eye
Vision	Finger counting close to face ,PR accurate PL +	6/6
Lid	Edema +, abrasion over eyelid	normal
Conjunctiva	SCH, CC+	normal
Cornea	Epithelial defect + D- folds +	normal
Anterior chamber	Flare +, cells 3+,vitreous +	normal
Pupil	4 mm (not reacting to light),traumatic mydriasis	Reacting to light
Lens	Posterior dislocated lens ,feathery appearance (rossette cataract)	clear
IOP	Digitally increased	Digitally normal
EOMS	Full and free	Full and free

INVESTIGATIONS

❑ On Indirect Ophthalmoscope

- Media –hazy
- Retina ON upto the extent seen.

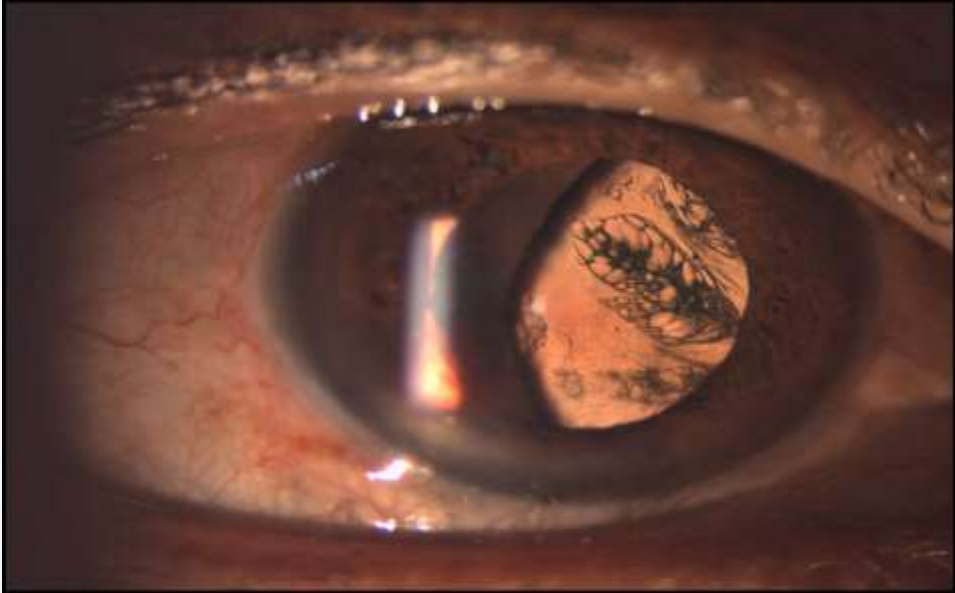


❑ On B-scan

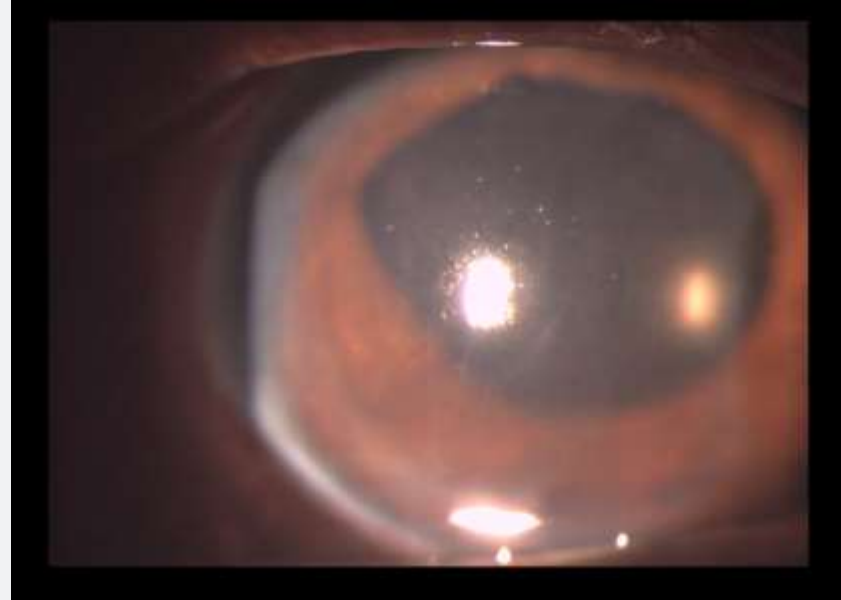
Globular hyperechogenicity in vitreous cavity suggestive of dislocated lens,
Retina ON,
minimal Vitreous hemorrhage with posterior vitreous detachment.



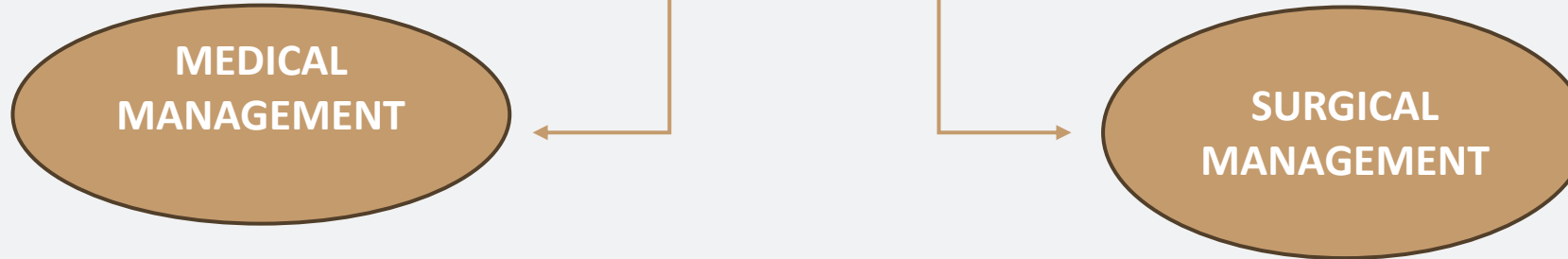
Pre-op



Post-op



MANAGEMENT



**Targeted to treat corneal
epidefect and reduce
inflammation.**

Locally [RE]

**e/d moxi 4/d
e/d CMC 4/d
e/o panthegel 3/d
e/d homide BD
e/d bidin tds**

**Pars plana vitrectomy +phaco-
fragmentation of cataractous
nucleus in vitreous cavity +posterior
vitreous detachment +base dissection
+3piece scleral fixation of haptics in
side pockets under local anesthesia
under guarded visual prognosis .**

DISCUSSION

• PATHOPHYSIOLOGY

DIRECT COUP INJURY

- ❑ Refers to direct injury to lens epithelium and capsule

Characteristic **ROSETTE cataract** (early rosette is star shaped due to the imbibition of fluid along the lenticular sutural lines; Late rosette forms after 1-2 years after trauma)

- ❑ Lens dislocation

CONTRECOUP INJURY

Refers to damage occurring at the distal, as a result of **shock waves**.

The traumatic shock wave that progresses through the eye causes insult to both anterior and posterior structures.

INVESTIGATIONS

- **POSTERIOR SEGMENT EVALUATION-** to look for retinal detachment,retinal tear, commotio retinae,vitreous hemorrhage and suprachoroidal hemorrhage. However, traumatized eye frequently present with limited view due to corneal tear,synechiae, lenticular pathology, vitreous hemorrhage.
- **B-SCAN-** Preoperative imaging using ultrasound techniques can provide information to the surgeon that can be beneficial in the planning for surgical intervention for traumatic cataracts.
- **ANTERIOR SEGMENT OPTICAL COHERENCE TOMOGRAPHY-** Used for evaluation of posterior capsule and lens status.
- **SCHEIMPFLUG IMAGING** -It can be used to diagnose posterior capsule rupture, visualise and quantify the size preoperatively. Traumatic PCR is evidenced by increased lens density at the cortex-vitreous interface, absence of vitreous prolapsed into the anterior chamber, and the amount of residual nucleus.
- **CT SCAN**– It is indicated in case of suspected foreign body .

SURGICAL INTERVENTION

ANTERIOR SURGICAL APPROACH

Used in

- nondislocated cataract with intact capsule,
- capsular rupture with cataract,
- subluxated lens with or without cataract and
- anterior dislocation of lens with /without cataract.

POSTERIOR SURGICAL APPROACH

Useful in

- PCR with cataract
- Posterior lens dislocation.

CONCLUSION

- Traumatic cataract is major cause of unilateral blindness
- They are often associated with injury to other ocular structures, requiring careful preoperative evaluation to determine the extent of injury and surgical management to achieve excellent visual and cosmetic outcomes.