



CATARACT COMPLICATED WITH LENS INDUCED GLAUCOMA IN HOSPITAL SULTANAH NUR ZAHIRAH (HSNZ)

Aini MA, Nor Anita CO

Ophthalmology Department, Hospital
Sultanah Nur Zahirah, Kuala Terengganu

INTRODUCTION

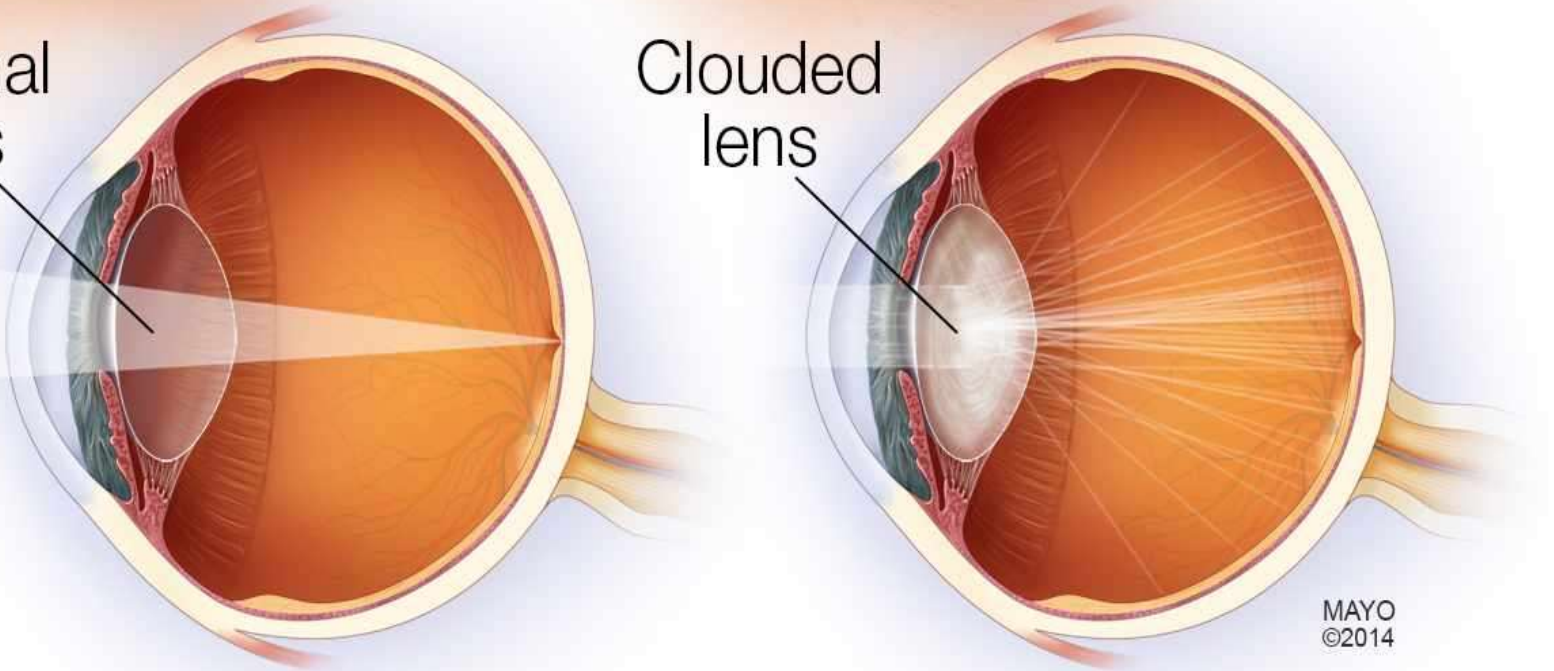
- Cataract is the leading cause of blindness and visual impairment throughout the world
- It is a **painless, progressive opacification of the lens** that is treatable by surgery (lens extraction)
- Currently, surgery is the only treatment available for this visually significant lenticular opacity

Normal

Eye with cataract

Normal lens

Clouded lens



- Cataract patients may present at any stages of lens maturity and different types of cataract can be found



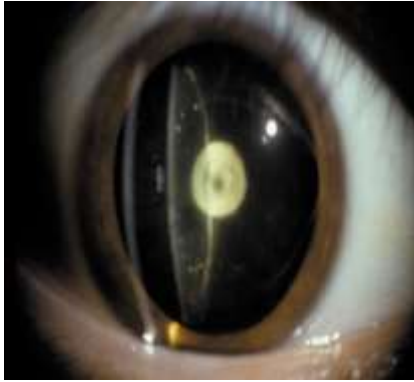
CORTICAL CATARACT



POSTERIOR SUBCAPSULAR CATARACT



NUCLEOSCLEROSIS



POLAR CATARACT

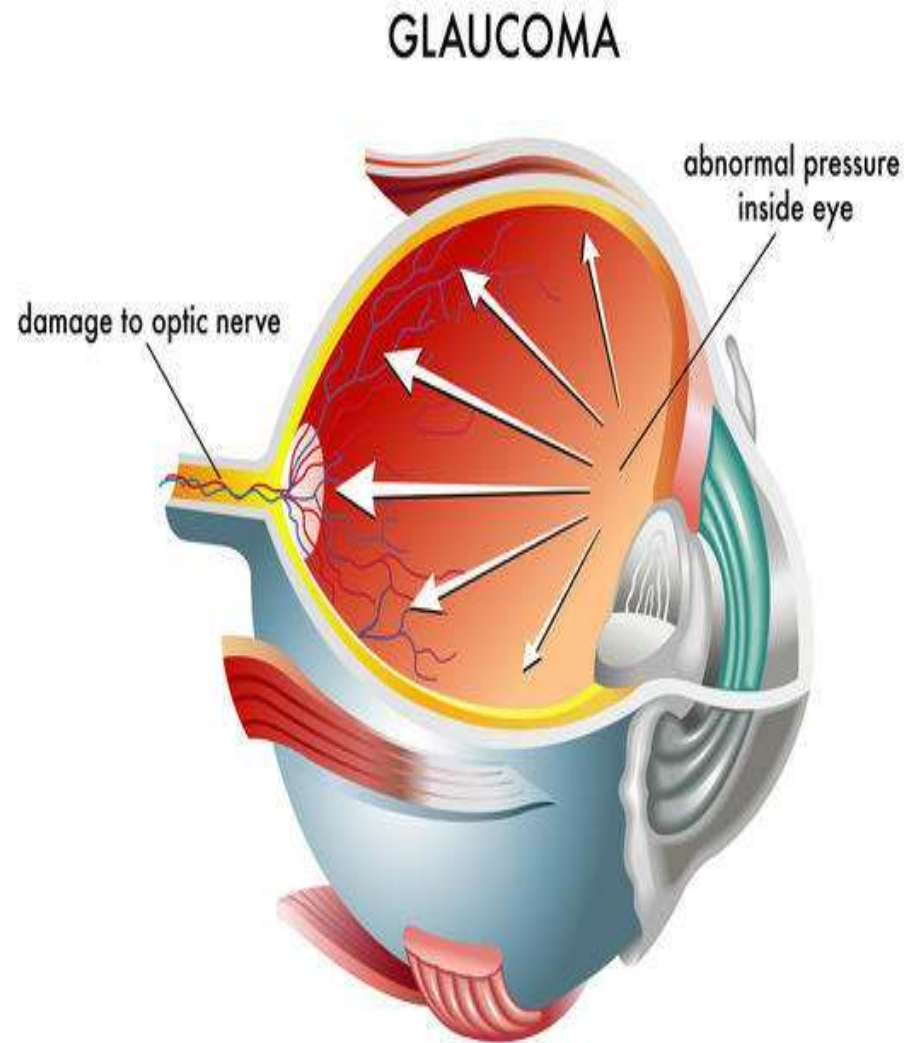


MATURE CATARACT

- Patients with uncomplicated cataract and no concurrent ocular co-morbidity has good visual prognosis post-operatively

- Left untreated, cataract can progress to become intumescent or hyper mature
- Leading to Lens Induced Glaucoma (LIG)

- Glaucoma represents a group of diseases defined by a characteristic optic neuropathy often related to elevated intraocular pressure (IOP)



- Normal IOP : 10mmHg – 21 mmHg
- Optic nerve damage occurs when:
 - IOP \geq 60 mm Hg for \geq 48 hours or
 - IOP higher than 35 mm Hg for \geq 7 days

Lens Induced Glaucoma (LIG)

- Consist of phacomorphic and phacolytic glaucoma
- Both condition usually present with painful red eye, tearing and headache

PHACOMORPHIC GLAUCOMA

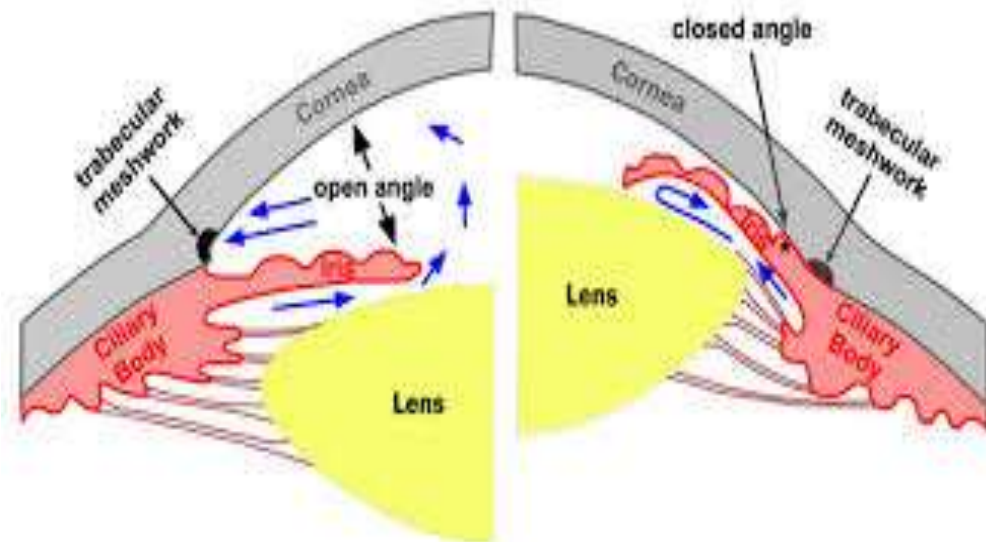
The mature, intumescent lens causes pupillary block and secondary angle closure



increased intraocular pressure(IOP)



irreversible optic neuropathy



PHACOLYTIC GLAUCOMA

Denatured lens protein leaks through an intact but permeable capsule



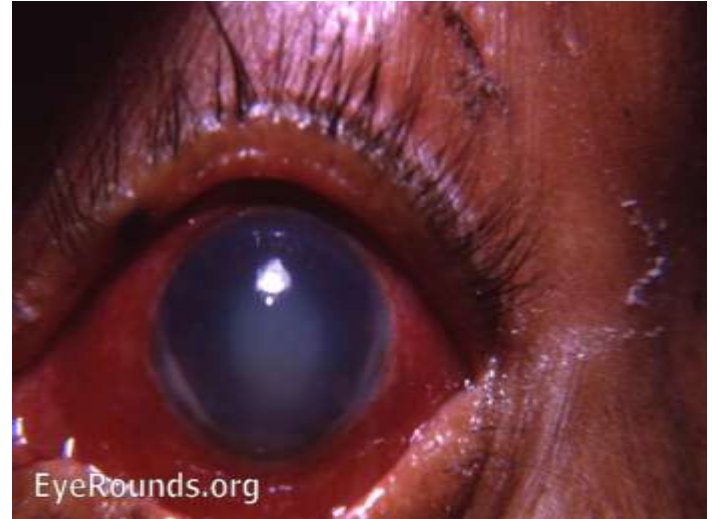
Lens proteins / other inflammatory debris obstruct trabecular meshwork



High IOP



Irreversible optic neuropathy



GLAUCOMA



- These two lens condition are a complication of cataract which may be **PREVENTED BY EARLY TREATMENT** of cataract

OBJECTIVE

General objective

To report on cases of cataract complicated with lens induced glaucoma in HSNZ.

Specific objective

To report on visual outcome of patients with lens induced glaucoma who underwent cataract extraction

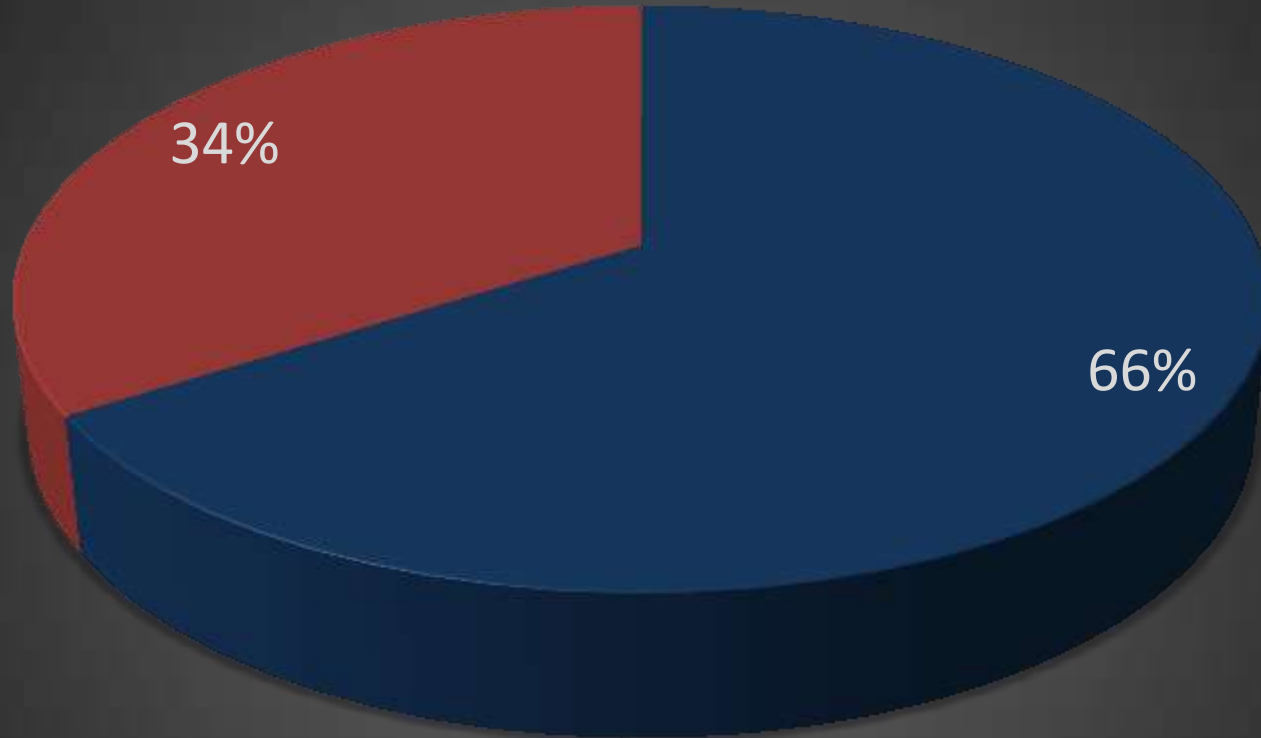
MATERIALS AND METHODS

- A retrospective study
- Data was collected from the National Eye Database (NED)
- From 1st January 2011 till 31st December 2015
- Total of 4347 operations were done during this period and a total of 41 patients who had lens induced glaucoma at the time of operation were included in this study

RESULTS

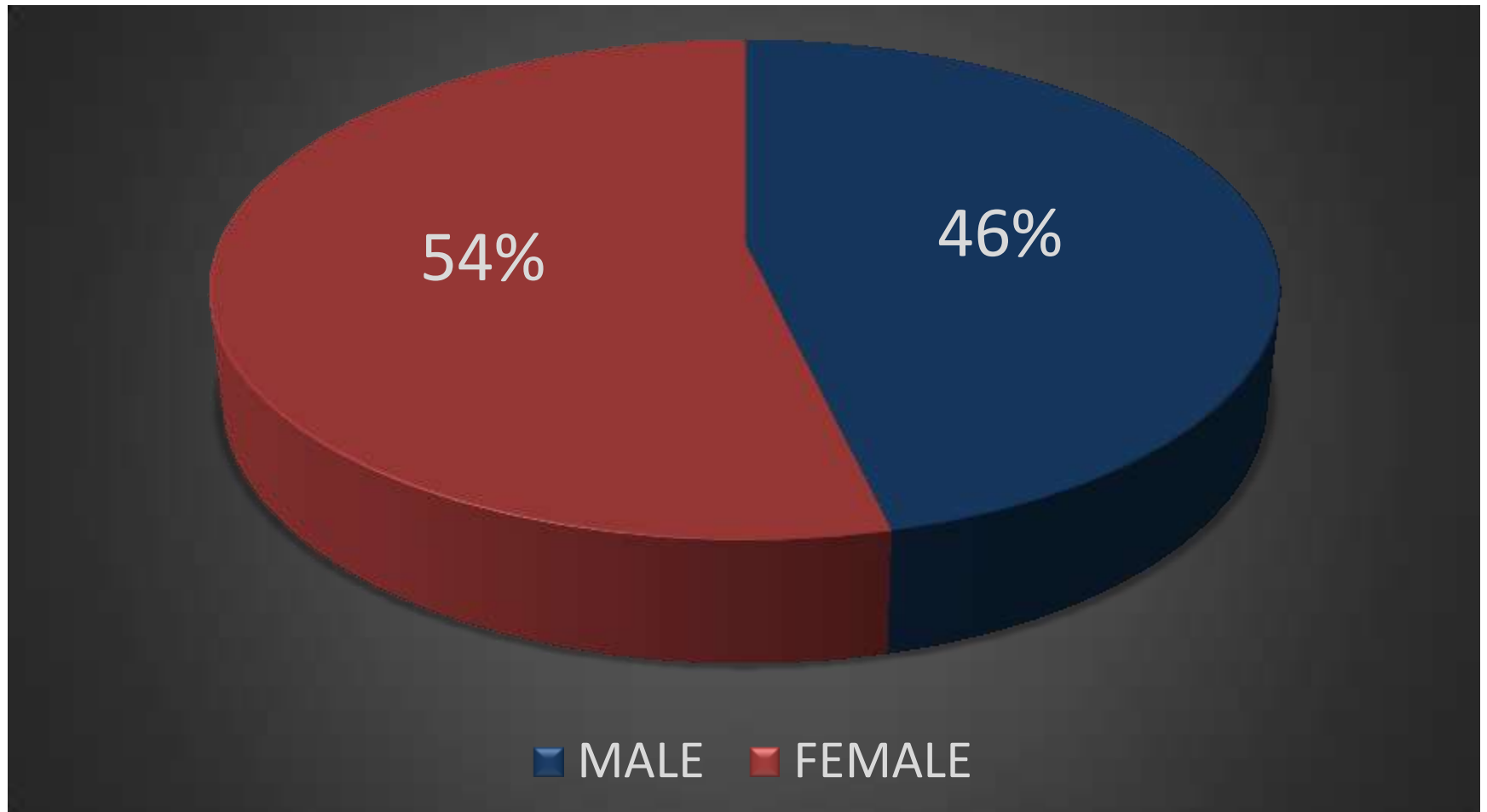
YEAR	NO. OF OPERATIONS	LENS INDUCED GLAUCOMA CASES	PERCENTAGE OF LIG (%)
2011	770	6	0.78
2012	765	5	0.65
2013	1014	7	0.69
2014	900	9	1.00
2015	898	14	1.56
TOTAL	4347	41	0.94%

TYPES OF LIG

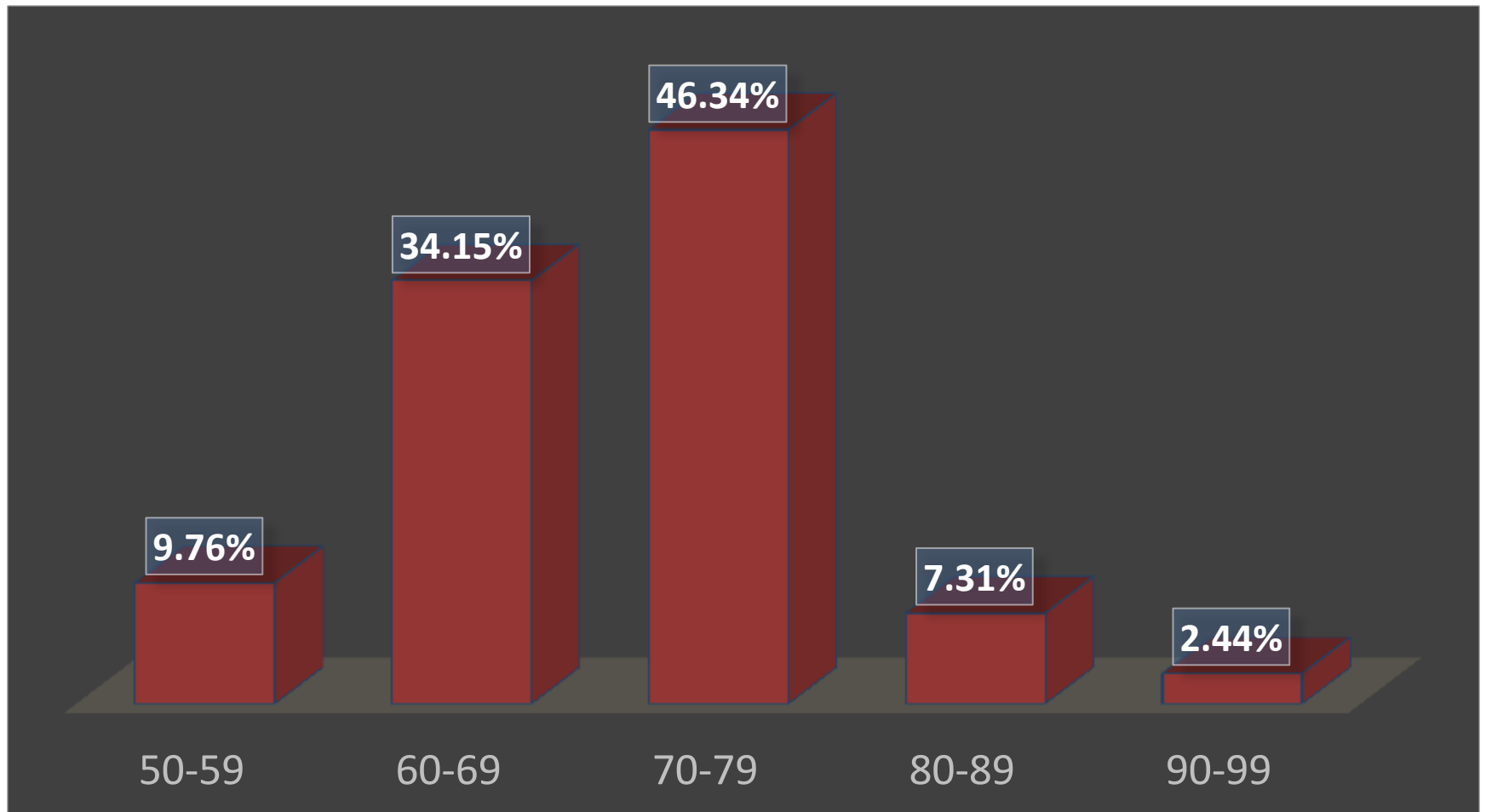


■ PHACOMORPHIC ■ PHACOLYTIC

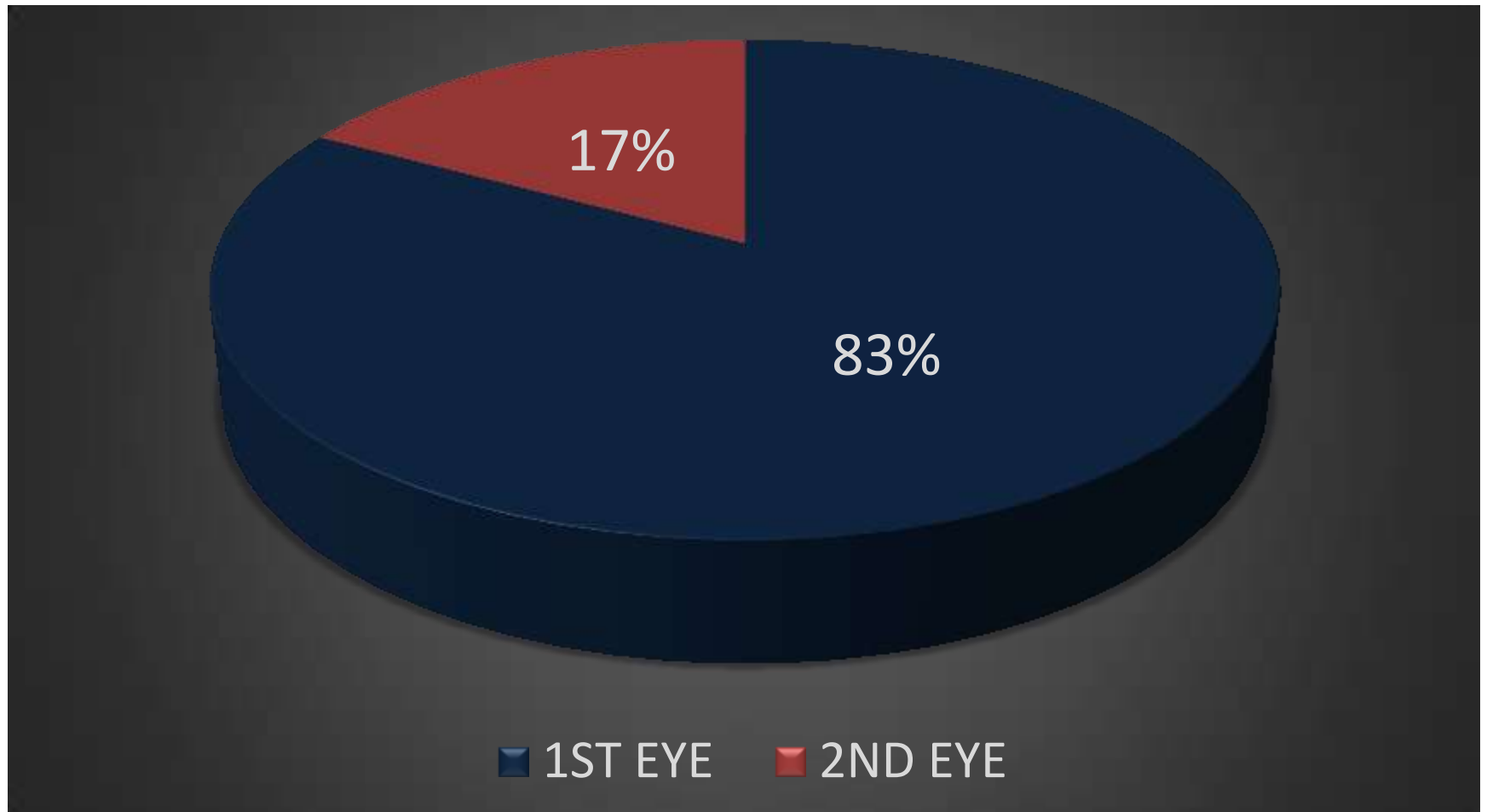
GENDER OF PATIENTS WITH LENS INDUCED GLAUCOMA



PERCENTAGE OF LIG PATIENTS ACCORDING TO AGE



OPERATION ON FIRST OR SECOND EYE IN LIG PATIENTS



POST OPERATIVE VISION FOR LIG PATIENTS

POST OP VA (BCVA)	NO. OF CASES	PERCENTAGE
Less than 6/60 (poor vision)	12	29.27%
6/18 – 6/60 (moderate vision)	15	36.58%
6/12 – 6/6 (good vision)	14	34.15%

DISCUSSION

- Cataract is a preventable cause of blindness
- It is a painless condition, with progressive loss of vision due to gradual opacification of the clear lens
- Lens induced glaucoma, which is a complication of untreated cataract, causes significant morbidity to patients

- Patient with LIG, usually present with sudden onset of eye pain, redness, tearing and headache
- Will also have significant high IOP
- Persistent high IOP leads to irreversible optic nerve damage

- Cataract surgery is curative
- However, optic nerve damage may already set in
- Leading to poor vision post-operatively

- Our study showed that >65% of LIG patients only achieve moderate or poor vision post-operatively
- Only ~34% achieved good vision post-operatively

- Although only 0.94% of total cataract operations done involved LIG,
- This condition cause significant morbidity to patient i.e. pain, poor visual prognosis
- And is actually preventable if treated early

- Result showed a subsequent increase in the percentage of patients with lens induced glaucoma over the years
- May be contributed to outreach programmes eg KK1M
- Through the program, patients are actively identified by going to rural areas and screening the population

- It is our goal that with these continuing programs, in future, no more patients will present with mature cataracts

Conclusion

- Cataract is the main cause for preventable blindness worldwide
- As such, it is important to identify these patients early before complications develop and cause irreversible optic nerve damage, with poor post operative visual outcome

REFERENCE

- B. Ushalatha, B. Chandrasekhar, M.V. Bhavani . A study of visual outcome in lens induced glaucoma. IOSR Journal of Dental and Medical Sciences. Volume 15, Issue 4 Ver. XIII (Apr. 2016), PP 58-61
- Prajna NV, Ramakrishnan R, Krishnadas R, Manoharan N. Lens induced glaucomas-visual results and risk factors for final visual acuity. Indian JOphthal. 1996 Sept;44(3): 149-155
- R. Ramakrishanan, Devendra Maheshwari, M. Jayahar Bharathi. Visual prognosis, intraocular pressure control and complications in phacomorphic glaucoma following manual small incision cataract surgery. Indian J. Ophthalmology. 2010. Jul –Aug; 58(4): 303-306

THANK YOU