STUDY OF OPEN GLOBE INJURIES IN A TERTIARY CARE CENTRE IN VISHAKAPATNAM

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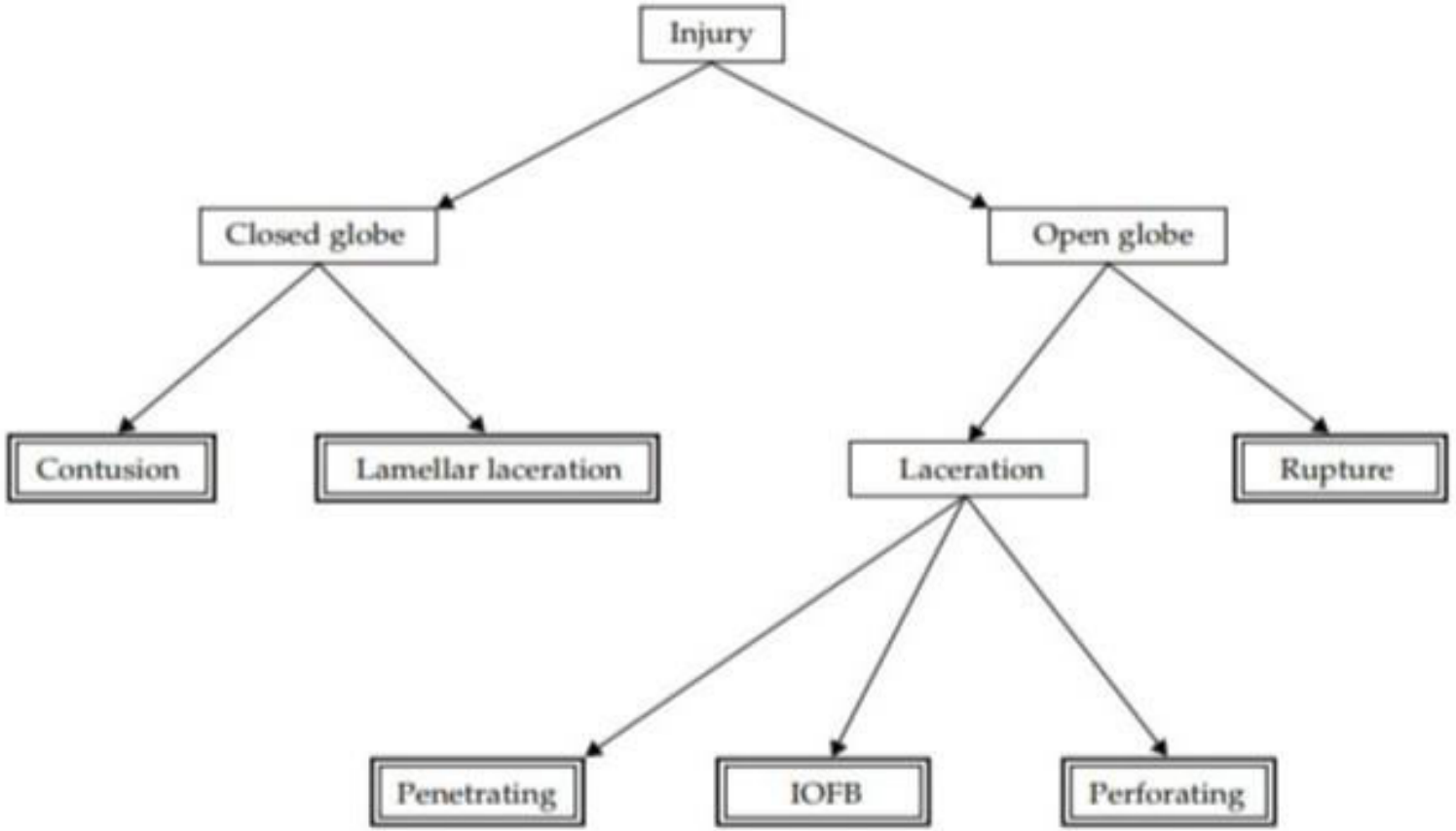
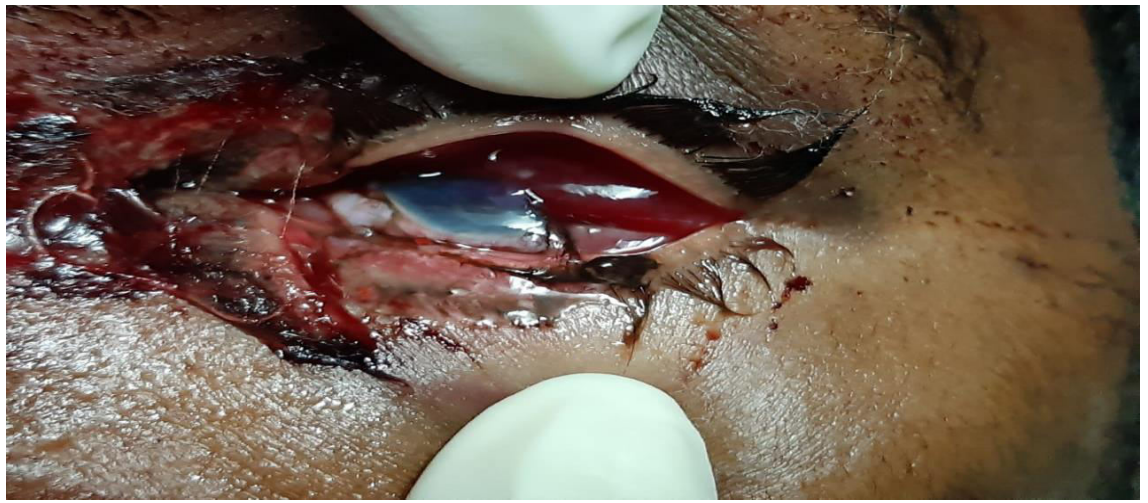
- NO FINANCIAL DISCLOSURE

INTRODUCTION:

- Ocular trauma is one of the major cause of ocular morbidity and blindness.
- Mechanical trauma to the eye has been classified by the Birmingham Eye Trauma Terminology (BETT) into open globe and closed globe injuries. BETT defines open globe injury as full thickness wound of eyewall(sclera or cornea or both).



- An open globe injury can be described as rupture or a laceration. A ruptured globe is classified as secondary to blunt trauma ,when an impact from a blunt object results in a momentary increase of the intraocular pressure resulting in an inside-out injury mechanism.
- A laceration is classified as an open-globe injury that is full-thickness usually caused by a sharp object with the wound occurring at the impact site by an outside-in mechanism. Furthermore, lacerations are defined as either a penetrating injury, intraocular foreign body, or a perforating injury.
- A penetrating injury is defined as a single laceration with no exit wound and if there is more than one entrance wound, each must be caused by a different agent.



- An intraocular foreign body is defined as a retained foreign object causing an entrance laceration;an intraocular foreign body is technically a penetrating injury but is grouped separately since there are different clinical implications due to the object.
- A perforating injury is defined as two full-thickness lacerations both entrance and exit usually caused by a sharp object or projectile where both wounds are caused by the same agent.
- The management of open globe injuries is most difficult and complicated.
- The standard management is primary wound repair which is mostly to restore the structural integrity of the globe at earliest regardless of extent of injury and Visual Acuity. Enucleation is considered in eyes where primary repair was not possible.
- In this retrospective study,we identify epidemiological characteristics and visual outcome of open globe injury.

AIM AND OBJECTIVES

- To study the epidemiological characteristics and visual outcomes of patients with open globe injury in a tertiary eye care center in Visakhapatnam

MATERIAL AND METHODS:

It is a Retrospective study of 50 diagnosed open globe injury cases presented to Government Regional Eye Hospital,Visakhapatnam over a duration of 6months from November 2020 to April 2021.

INCLUSION CRITERIA

- Open globe injuries

EXCLUSION CRITERIA

- Closed globe injury
- Chemical injuries
- Thermal injuries
- Radiational injuries

Collection of data from records include:

- patient age, gender.
- visual acuity at time of presentation
- Nature of injury
- Place of injury
- Slit lamp examination
- B-scan.
- management
- Final visual acuity are noted.

RESULTS

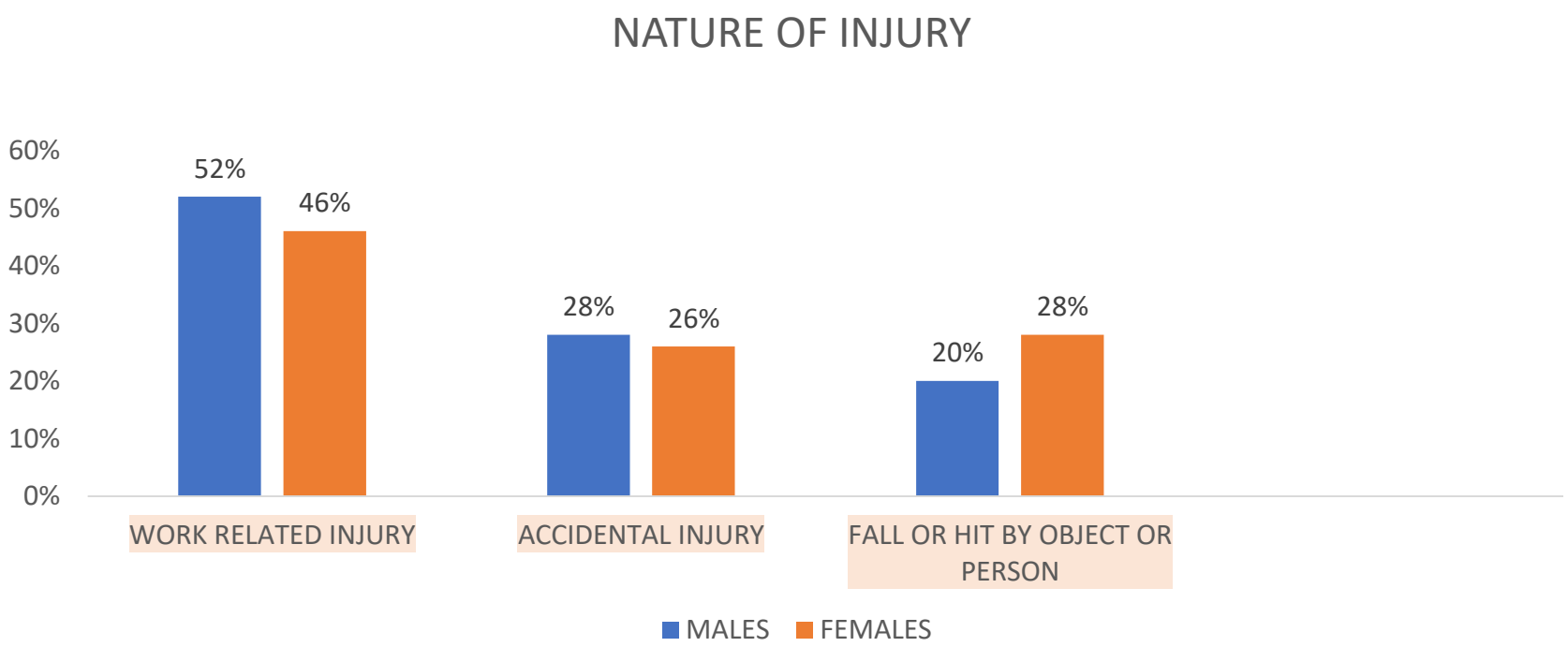
Age distribution of open globe injuries

AGE	0-20YRS(12%)	20-40 YRS(60%)	40-60YRS(14%)
MALES	10%	42%	16%
FEMALES	2%	18%	12%

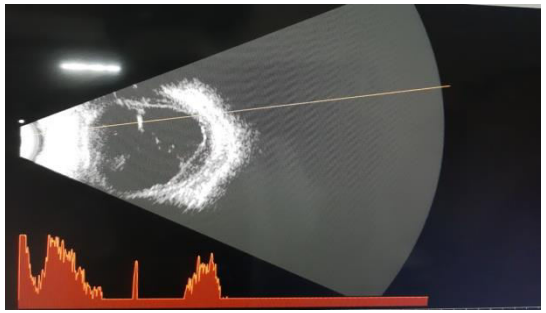
Sex distribution of open globe injury patients

SEX	NO.OF PATIENTS	PERCENTAGE
MALES	35	70%
FEMALES	15	30%

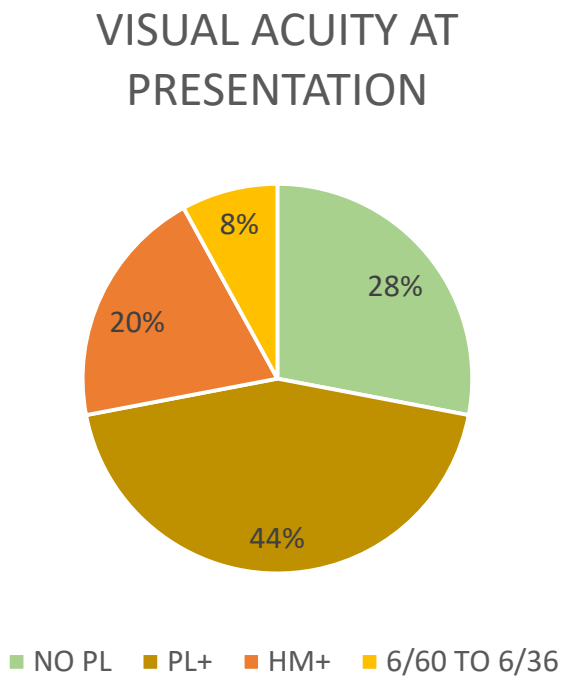
- **Distribution of nature of injury**

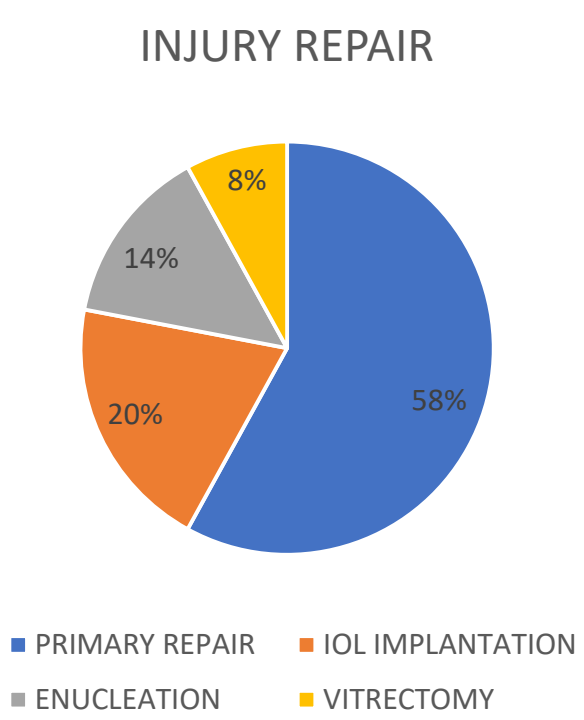


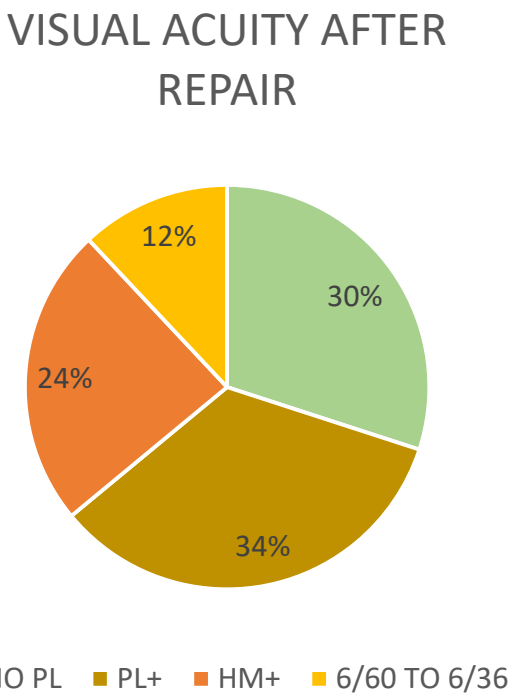
Frequency of distribution of clinical variables



Management outcome







DISCUSSION

- Open globe injuries are more devastating, successful surgical repair of open globe injury and subsequent visual rehabilitation is a topic of great significance and challenge to the practicing ophthalmologists.
- In our study ,50 eyes of open globe injury were included in which majority were work related injuries and were mostly corneal and the final visual outcome improved with early treatment.
- I Rahman et al studied 115 cases of open globe injuries and they have identified several factors that may aid the clinician in deciding on the prognostic value of primary repair. Blunt injuries associated with adnexal trauma, with poor initial visual acuity, the presence of an RAPD or retinal detachment, and the absence of a red reflex are associated with a significantly higher rate of subsequent enucleation.
- Agarwal et al studied in 172 eyes that final visual outcome of open globe injuries is dependent on several factors like mode of injury,visual acuity at presentation and size and location of injury.
- Yu Meng et al studied 314 eyes of open globe injuries, and reported that the most important prognostic factors influencing the final VA were initial VA, RAPD, and the zone of injury.
- Ankitha kothari et al studied 40 eyes of open globe injuries stating that males are mostly commonly affected and occupational injuries were more common.

CONCLUSION:

- Our study shows majority of patients with open globe eye injury were males between 20-40 years age group ,specially in the working group.
- Corneal injuries were most common.
- A significant improvement in visual acuity was achieved with early treatment of open globe injury.

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