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## Case report

### RETAINED STONE PIECE IN ANTERIOR CHAMBER: A CASE REPORT

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### ABSTRACT

**Background:** Anterior segment foreign bodies are un-common, making up only about 32% of all intraocular foreign bodies. The present case report aims to study the effects of foreign bodies in the anterior chamber. **Case Report:** Sixty year old female presented with a gradual diminution of vision in left eye since one year with a history of trauma twenty years back. Examination revealed presence of stone piece in the anterior chamber coincident with cataract. No signs of any damage due to retained foreign body were observed. **Conclusion:** Although prompt removal of certain intraocular foreign bodies is warranted to avoid untoward ocular effects in the present case, the piece of stone has remained silent without causing any ocular morbidity.

**Keywords:** Retained stone piece, Anterior chamber, Ocular trauma.

### INTRODUCTION

Anterior segment foreign bodies are un-common, making up only about 32% of all intraocular foreign bodies.<sup>1</sup> Ocular trauma is more common among the rural population of India. In cases of penetrating ocular trauma, Intraocular foreign bodies are potentially vision threatening. Intraocular foreign bodies account for almost 40% of all cases with penetrating ocular trauma.<sup>2</sup> The extent of injury often depends on four factors: the size and composition of the foreign body, the force at which the foreign body enters the eye, the location of the entrance wound and the final resting place of the foreign body.<sup>3</sup> Retained intraocular foreign bodies most commonly results from occupational activities and predominantly involving males in their 3<sup>rd</sup> to 4<sup>th</sup> decades<sup>4</sup>. The velocity and point of entry determines the site at which a foreign body comes to rest. Non-metallic foreign bodies usually have a lower velocity than the metallic ones, therefore once they penetrate the cornea, they tend to remain in the anterior chamber<sup>5</sup>. The resulting reaction in the anterior chamber depends on its composition,

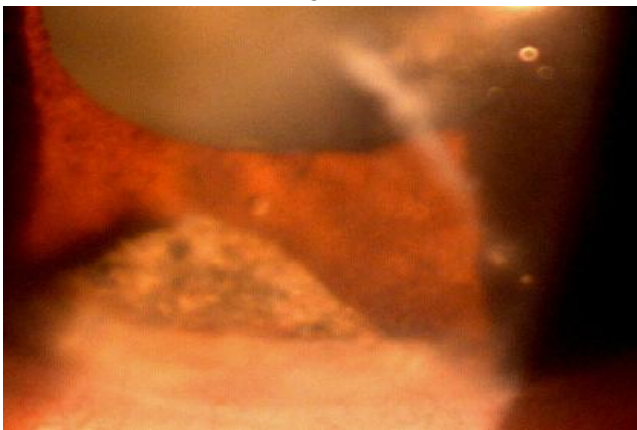
shape and size together with the presence or absence of irritation of the adjacent structures, corneal endothelium, iris and lens. Ocular trauma is common among the rural population of India as people are exposed to work related conditions like agriculture injuries, thorn pricking injuries, construction work related injury.

### CASE REPORT

A 60 year old female, presented to the Ophthalmology department of a tertiary care hospital, based in a rural area with complaints of gradual, progressive, diminution of vision in her left eye for the past year. The patient gave a history of trauma to left eye while working 20 years back for which she received no treatment at the time of injury. The patient was, however asymptomatic for the last 19 years.

On examination best corrected visual acuity in her right eye was 6/12 and her left eye was 6/36. On

anterior segment examination with slit lamp biomicroscope her right eye was within normal limits except for the presence of immature senile cataract. Left eye examination showed a linear leucomatous corneal opacity 4mm in length located in the infero-temporal quadrant at 4 o' clock meridian 2mm inside the limbus extending into the visual axis. The anterior chamber depth was normal and a triangular piece of stone measuring approximately 4x4x1 was noted in the anterior chamber in the infero-nasal quadrant at 6 to 8 o'clock position without any signs of active inflammation (Fig.1)



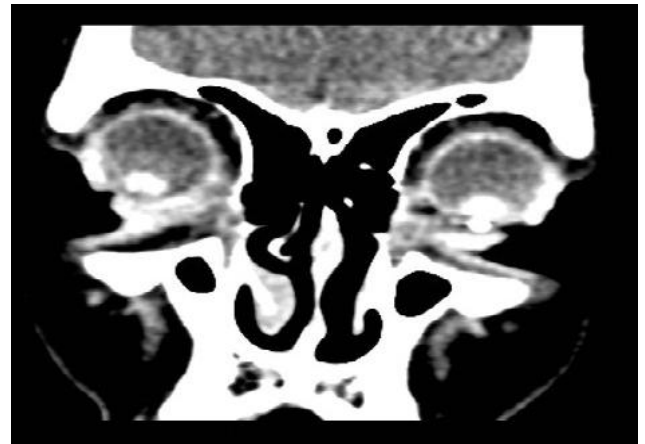
**Fig1: Stone piece in anterior Chamber with sealed corneal tear**

The foreign body appeared between cornea and iris and was immobile with fibrosis around it, was suggestive of previous inflammation. The lens showed early cataractous changes. B-scan Ultrasonography was done to rule out any posterior segment pathology associated with ocular trauma and localise and posterior segment foreign body if present. It showed a hyper-reflective, ill-defined area measuring 4.7x4 mm present without posterior acoustic shadowing in the anterior chamber while the posterior chamber was normal (Fig.2).



**Fig.2: B-scan showing foreign body embedded in the anterior chamber**

Computed tomography of Left orbit was done to locate and measure the dimensions of foreign body and to know if there is any extra-ocular foreign body present. It showed a well-marginated oval hyper dense area with C.T. attenuation 305-380 HU measuring about 4.6x4.8mm seen embedded in infero-medial aspect of the anterior chamber. In our case no active interventions were done at present.



**Fig.3 CT orbit showing foreign body in left eye**

## DISCUSSION

The rural population of India is highly exposed to various types of occupational injuries. Ocular injuries can present as an isolated problem or as a part of poly-trauma.<sup>5</sup> They are workers and are involved in laborious outdoor field work such as farming, road construction.

The majority of them are from poor socioeconomic class and are illiterate. They are not aware of the complications of ocular injuries and therefore land up with higher ocular morbidity and mortality. Use of protective devices at work is not a routine practice. The index, patient in this case report was injured from a piece of stone while she was working at the road construction site. Under such circumstances the possibility of a piece of stone carrying micro-organisms and resulting into fulminant infections is usually high. Primary repair with removal of foreign body should be the plan of treatment in such cases. Surprisingly, this was not attempted in our case as the patient was poor and being a daily wages worker could not afford time away from work. So the foreign body remained embedded in the anterior chamber for twenty years causing no direct or indirect harm to the surrounding structures. No active interventions were warranted as the foreign body was silent and did not disturb the

visual acuity of the individual. A study of 70 military soldiers who sustained IOFB injuries concluded that Delayed IOFB removal with a combination of systemic and topical antibiotic coverage can result in better visual outcome without an apparent increased risk of endophthalmitis or other deleterious side effects.<sup>6</sup> In our case no active interventions were done at present, however routine cataract surgery can be planned in future without disturbing the foreign body.

## **CONCLUSION**

From our case, we conclude that in selected cases of anterior segment foreign body Prompt removal of foreign body is not warranted if it appears to be inert or encapsulated and may be left alone.

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**Conflict of interest:** Nil

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