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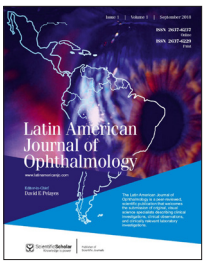

Pictorial Essay *Comprehensive*

Post phacoemulsification shine: Iatrogenic foreign body deposition

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ABSTRACT

A 55-year-old woman, with a history of phacoemulsification and intraocular lens (IOL) implantation in both eyes, presented for a routine check-up. Slit-lamp examination of the left eye revealed a patch of silver-colored deposits with a metallic sheen at the 2 o' clock iris position, absent on the conjunctiva or cornea, differentiating this from typical ocular argyrosis. The likely diagnosis was residual phacoemulsification tip deposits consolidated on the iris, an unusual post-surgical manifestation.

Keywords: Intraocular foreign body, Foreign body, Phacoemulsification

INTRODUCTION

One of the leading causes of avoidable blindness in the world is age-related cataractous changes in the lens, which is most commonly tackled using a Phaco-emulsification procedure. Phaco-emulsification basically consists of a Piezo-electric tip which oscillates at a frequency between 27 to 60 kHz, leading to nuclear piece emulsification, combined with simultaneous aspiration of the emulsified material. Phaco tips, usually made of titanium alloys, are available in different materials, sizes, and shapes. Long-term usage of the same phaco tip leads to increased roughness & brittleness, along with decreased efficacy of emulsification.[1] We present a rarely-reported complication of likely phaco tip fragment deposition.

DISCUSSION

A 55-year-old female with a recent history of uncomplicated phacoemulsification and IOL implantation in the left eye presented for a routine postoperative check-up. Visual acuity was 20/20, and the cornea was clear. Slit-lamp examination revealed a foreign body deposit with a metallic sheen at the 2 o' clock iris position [Figure 1]. There was no history of recent trauma. The deposits were absent on the conjunctiva and cornea. The anterior chamber (AC) was quiet, with no signs of infection or inflammation. This finding was not noted pre-operatively and likely represented residual phacoemulsification tip metallic deposits consolidated on the iris, an unusual post-surgical finding. The patient has been on regular follow-up for the past 5 months, with no ocular complaints. Vision is maintained at 20/20 with clear cornea and quiet AC.

The anterior chamber is a common site for deposition of foreign body after cataract surgery. Post-phacoemulsification intraocular metallic foreign bodies, though rare, have been reported before.[2-4] The plausible causes are contact between the fast-oscillating Phaco tip and the Sinskey hook/chopper used during surgery, or the gradual cavitational erosion of the phaco tip.

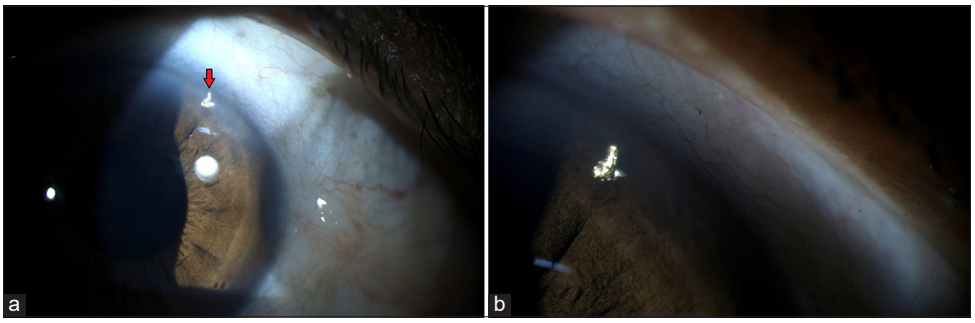

Figure 1: (a) Red arrow mark showing the metallic foreign body deposition at 2 o-clock position; and (b) magnified image showing the foreign body deposition.

The discovery of an inert foreign body in the AC is usually by serendipity. Depending on the nature of foreign body, the clinical presentation, and the surgeon's experience, management may be conservative or surgical (foreign body removal).

CONCLUSION

Inert foreign bodies such as Titanium (in our case) may be left in situ, when sitting quietly. However, regular follow-up should be maintained to evaluate for signs of inflation/infection. Phacoemulsification, though one of the most performed surgeries world-wide, does not have well established guidelines as to the repeated usage of the same instruments in multiple surgeries and the ideal time for changing instruments, especially keeping in mind low socioeconomic status set-ups. There is a strong need to investigate factors which increase chances of instrument degradation and fracture, and arrive at a suitable guideline as to when instruments need replacement.

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