



Ophthalmologic Image

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Silver lining in the dark clouds: Sinking cortex sign

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Image Presentation

A 40 years old male reported with gross diminution of vision right eye for 6 months. He gave a history of trauma to the right eye at the age of 10 years with a broomstick. On examination his vision was 1/60 in right eye and 6/6 in left eye. Careful slit lamp examination revealed a small linear leucomatous grade opacity extending from 5 to 6 clock hour position inferiorly, with a corresponding iris defect. (Figure 1) On dilated examination patient had mature white cataract with intact anterior capsule and “sinking cortex” sign suggestive of posterior capsular (PC) defect. (Figure 2A) USG B Scan showed a clear-cut defect in PC with scattered vitreous echoes. (Figure 2B) Patient underwent pars plana lens extraction and multipiece intraocular lens placement by a vitreo-retinal surgeon. Patient had excellent visual recovery with well centered intra ocular lens. Post operatively the vision recovered to 6/6. (Figure 3A and 3B)

Traumatic cataracts can be associated with posterior capsular defects (1), which might lead to absorption of lens matter and sinking of posterior cortex in the vitreous through the defect, thereby creating an empty space under the anterior capsule suggestive of the “Sinking cortex sign” (2). In mature traumatic cataract when the visualisation of PC is not possible, clinical presence of this sign is a hallmark of pre-existing PC defect. B scan further helps in identifying the exact location of PC defect and floating cortex in the vitreous (3). This is invaluable in planning the surgery.

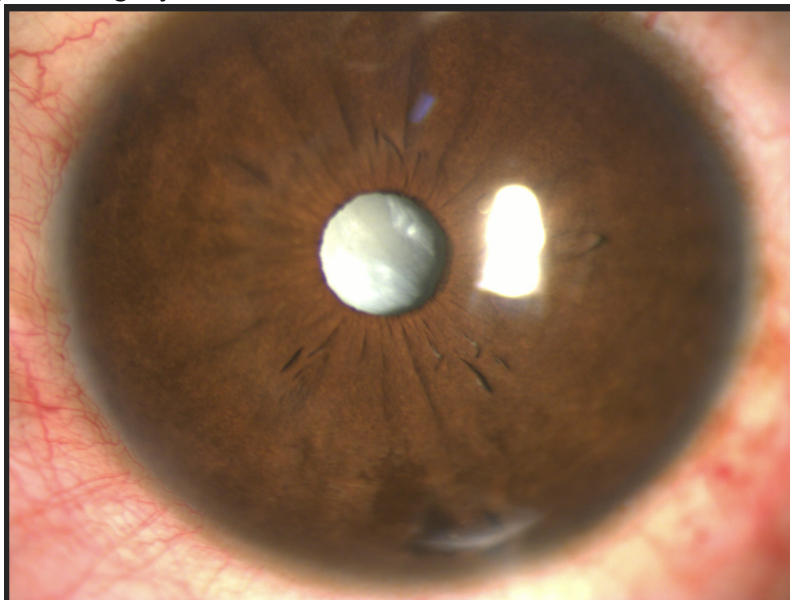


Figure 1. Slit lamp image with diffuse illumination showing linear corneal opacity, underlying iris defect and post traumatic mature cataract.

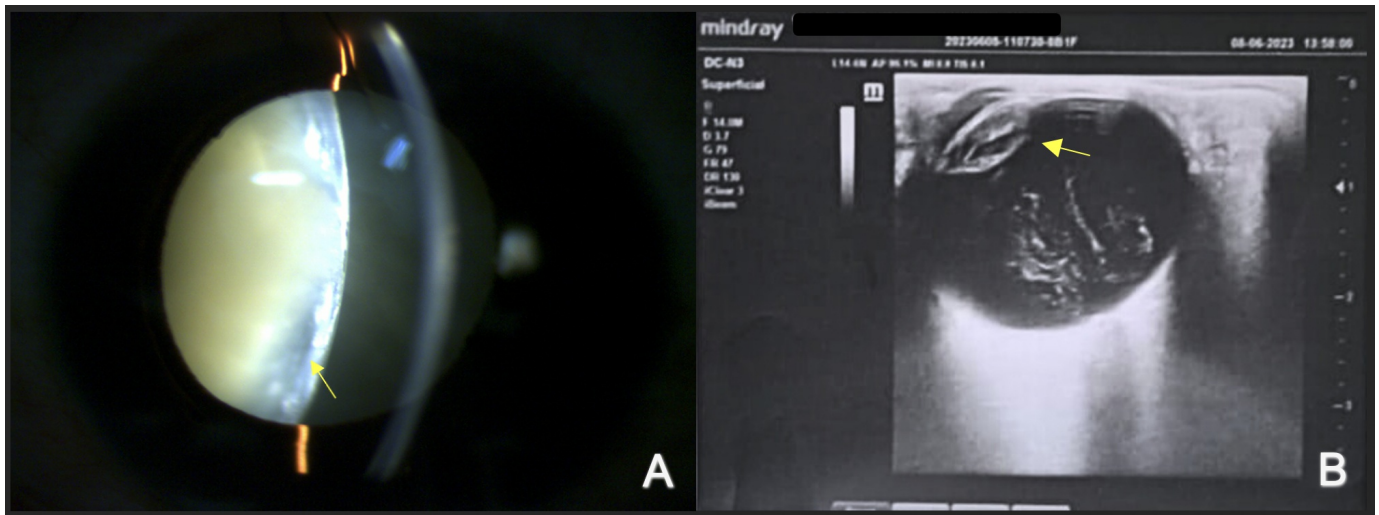


Figure 2. A – Slit lamp image with oblique illumination showing sinking cortex sign (yellow arrow depicting clear space between cortex and anterior capsule) B - USG B-scan showing well defined posterior capsular defect (Yellow arrow) and scattered vitreous echoes.

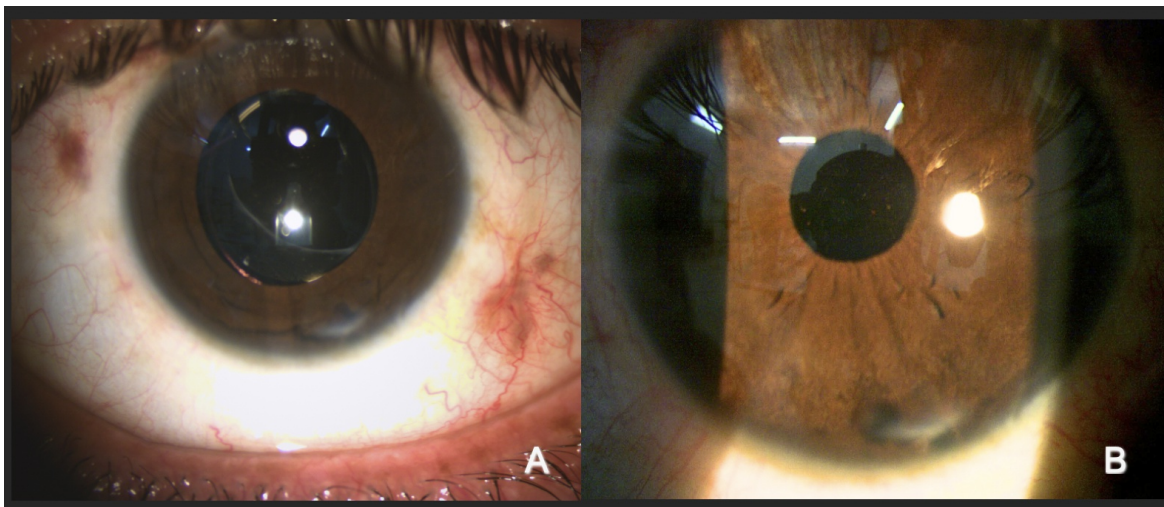


Figure 3. Post-Operative image showing well centered intraocular lens in dilated (A) and constricted pupil (B).

This clinical image article highlights the importance of meticulous slit lamp examination in mature cataracts to identify the highly predictive sign of pre-existing PC defect viz 'sinking cortex sign.' This helps in surgical planning, decreases the incidence of intraoperative surprises, and ensures optimum visual outcome. This also reports the incidence of late onset post traumatic cataract after 30 years of initial injury.

Limitation(s): Lack of anterior segment optical coherence tomography (AS-OCT) images. AS-OCT can be a useful imaging modality for identification and localisation of pre-existing posterior capsular defects before surgical planning.

References

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