

POST-TRAUMATIC IRIS IMPLANTATION CYST

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PRESENTATION OF CASE

An 11-year-old female child came with the presenting complaints of intolerance to light in right eye since one month following a blunt trauma with mobile phone. She had no other systemic illness at presentation with no history of any ocular allergies or use of any medications. On presentation her best corrected visual acuity was 20/40 in right eye with upward chin lift. Further slit lamp examination showed a small scar measuring 3 mm x 1 mm in superior part of cornea with iridocorneal touch at the same point. On examination of iris, 6 mm x 7 mm fluid filled cyst cavity with well-defined margins 6 mm below superior limbus from 12 'O' clock to 1 'O' clock with iris pigments and vessels seen superiorly over the cyst, fluid was partially turbid on retro illumination. The cyst was covering approximately half of the undilated pupil. No sentinel or intrinsic vessels was seen within the cyst with otherwise normal pattern of iris. The intraocular pressure was 16 mmHg with applanation tonometry. Fundus findings were normal. UBM showed right sided iris cyst measuring 4 x 3 x 2.5 mm with thick walls. A preoperative anterior segment OCT confirmed similar findings.

CLINICAL DIAGNOSIS

Clinical examination was suggestive of post-traumatic implantation cyst of iris.

DIFFERENTIAL DIAGNOSIS

1. Iris epithelial inclusion cyst.
2. Iris nevus.
3. Iris melanoma.
4. Primary iris cyst.
5. Metastatic lesion.
6. Ciliary body melanoma.
7. Medulloepithelioma¹

PATHOLOGICAL DISCUSSION

Post traumatic iris implantation cyst is one of the relatively rare occurrences. Posterior pigment epithelial cyst, iris stromal cyst are included in primary cyst or acquired while ocular trauma, tumour, inflammatory conditions, parasitic ocular invasion or prolonged use of topical miotics or prostaglandins acquired may develop secondary cyst.² Epithelial cells of the cornea or conjunctiva form this type of cyst. These cells are implanted through wound.³ Cyst is formed by the growth of these cells in anterior chamber.⁴

If the iris cyst is small and asymptomatic, close observation may be sufficient. However, larger iris cysts can grow in size, and cause pupillary block and secondary glaucoma, uveitis, corneal decompensation and eventually, a painful blind eye.^{5,6} Anterior segment OCT, UBM and histopathology help to reach to the accurate diagnosis.

DISCUSSION OF MANAGEMENT

Iris cyst that are stable and not causing symptoms or secondary complications require no treatment but should be followed regularly. In our case the iris cyst was mostly serous and occupying more than half of pupillary area thus increasing the risk of amblyopia, hence warranting intervention. A 25G needle was used to enter the cyst 1 mm behind the limbus, cystic fluid was aspirated (0.2 ml) and the same volume of 95% ethanol was injected into the cyst followed by its removal after 1 minute. Postoperatively the patient was given topical prednisolone and atropine eye drops. Postoperative BCVA after 1 week was 20/20 with IOP being 18 mmHg. There was complete involution of cyst. The patient has been followed for 1 year now with her present BCVA being 20/20 with IOP being 16 mmHg on applanation tonometer with no signs of recurrence.

Conventional treatment procedures for iris cysts include surgical excision and devitalization of the epithelial tissues. The treatment modalities are complete block excision of all epithelial layers and adjacent cornea, iris, anterior chamber angle and ciliary body, with full-thickness corneoscleral graft.^{7,8} Vitrectomy and lensectomy in phakic eyes, fluid-air exchange and cryodestruction of residual cells at the excision site.^{7,9} However, these procedures, while generally successful in eradicating the epithelial tissue, involve extensive surgical procedures with the possibility of significant collateral damage to adjacent ocular structures, with resultant poor functional outcome and could lead to adverse effects like infection, bleeding, cataract formation,

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complications from cyst rupture and potential defect of iris. Microscopically monitored aspiration and ethanol induced involution of cysts is safe and cost effective with cyst involution obtained in maximum cases.¹⁰

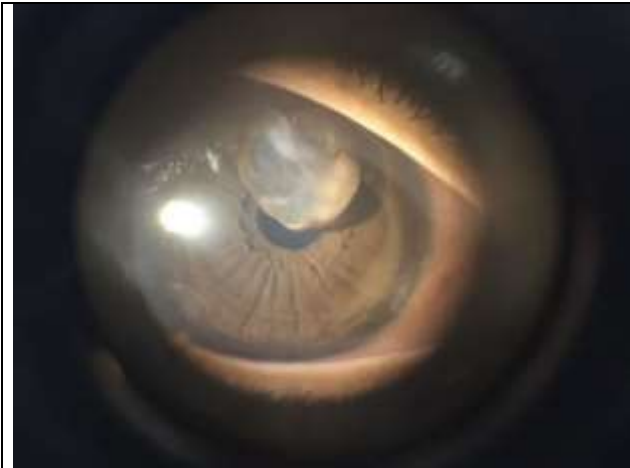


Figure 1. Clinical Picture Showing Iris Cyst

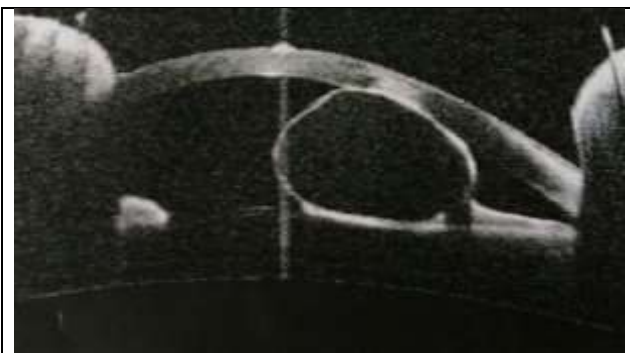


Figure 2. Anterior Segment OCT Image of Iris Cyst



Figure 3. Post-Operative Clinical Picture

FINAL DIAGNOSIS

On the basis of clinical examination, UBM and OCT we concluded with the diagnosis of post-traumatic implantation cyst of iris.

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