SURGICAL MANAGEMENT OF COMPLEX IRIS STROMAL CYSTS: SHEFFIELD EXPERIENCE

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INTRODUCTION

Iris stromal cysts remain to be a diagnostic and management challenge. The vast majority of lesions rarely progressing or cause visual complications. However, enlargement can cause obstruction of the visual axis, corneal decompensation, secondary uveitis and glaucoma.

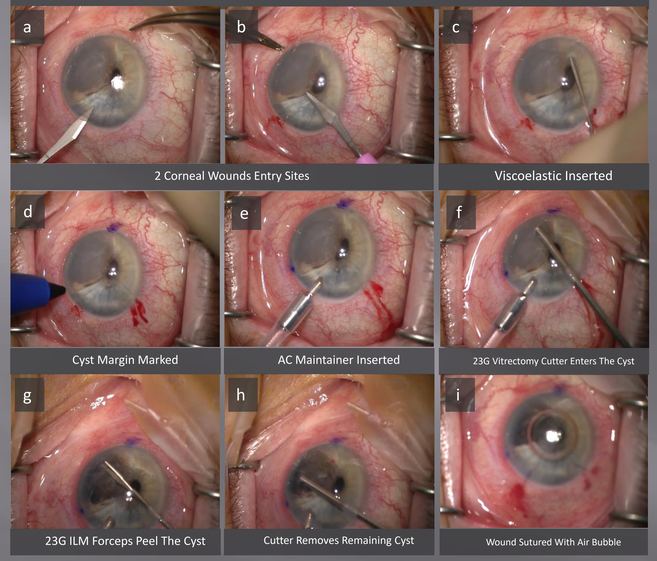
We present our novel surgical technique for successfully managing large, complex iris stromal cysts.

METHODS

Novel surgical technique of de-roofing iris stromal cyst, described in Figure 1, using the following steps:

- Corneal incisions, main wound and side port
- Viscoelastic inserted
- Iris cyst margin marked
- Anterior chamber maintainer inserted into the side port
- 23G vitrectomy cutter used to enter the cyst and remove cyst
- 23G ILM forceps used to strip the iris cyst wall from the endothelium
- 23G vitrectomy cutter used to remove the remaining cyst
- Wounds sutured with 10.0 nylon with anterior chamber air bubble

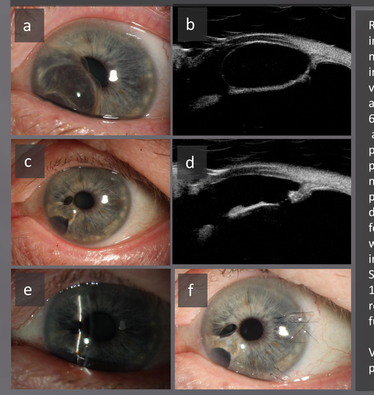
FIGURE 1: IRIS STROMAL CYST: NOVEL SURGICAL TECHNIQUE



RESULTS

Three patients (Case 1-3), mean age 70 (range 62-84), had symptomatic, progressive enlargement of their iris stromal cyst. Average clock hours affected was 4, range 2 – 6. All patients had endothelial touch, pupil distortion and obscured visual axis. The mean follow up of 30 months, range 23-43. VA remained stable or improved. All patients had no recurrence 15 months post op; one patient developed a small cyst which remained stable.

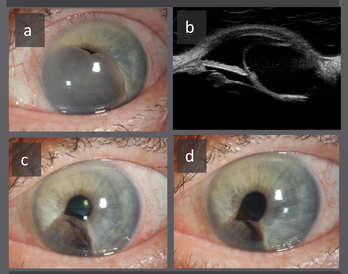
CASE 1: 64 YEAR OLD MALE



Right iris stroma cyst increasing in size over 6 months with intermittent iritis and reduction in vision due to cyst growth and cataract formation, VA 6/18.
a) pre-operative photo b) pre-op UBM c) one month post-op photo d) one month post-op UBM e) post op photo showing iris defect f) post op photo following cataract surgery with morcher iris segment insertion.
Small cyst recurrence at 15 months post op, remained stable with no further intervention.

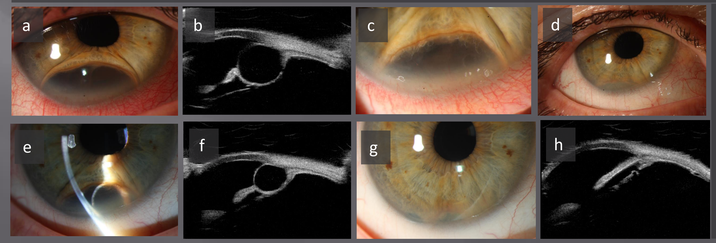
VA 6/6 with follow up period 43 months

CASE 2: 84 YEAR OLD FEMALE



Left iris stroma cyst increasing in size over 2 years obscuring visual axis, VA 1/60
a) pre-operative photo b) pre-op UBM c) one month post-op photo d) one month post-op photo. VA remained poor due to corneal decompensation post-operatively. Followed up locally due to COVID, 17 months later, had pupilloplasty. Follow up period 24 months

CASE 3: 62 YEAR OLD FEMALE



Right iris stroma cyst increasing in size over 6 months obscuring visual axis and causing photophobia, VA 6/6. Had x2 YAG attempts but recurrence occurred 3 months later.

a) photo on initial presentation b) initial UBM c) post YAG laser d) 2 weeks post YAG e) recurrence 3 months later f) UBM of recurrence g) post op photo g) post op UBM.
VA remained 6/6 with no further recurrence. Follow up period 23 months

CONCLUSION

The treatment of iris stromal cysts still remain controversial. Surgical intervention is usually the last resort with a conservative stepwise approach[1]. Our case series demonstrates this novel technique of stripping the iris cyst wall from the endothelium is an effective surgical technique to manage complex iris stromal cyst to prevent further secondary complications with a reduced risk of recurrence compared to other interventions.

1. Georgalas I, Petrou P, Papaconstantinou D, Brouzas D, Koutsandrea C, Kanakis M. Iris cysts: A comprehensive review on diagnosis and treatment. Surv Ophthalmol. 2018 May-Jun;63(3):347-364