A RARE CASE OF IRIS MELANOMA: A CLINICAL REVIEW

Dhwani Garg1, Neelima Mehrotra2, J. S. Verma3, Akhil Agarwal4, Preeti Gupta5

13rd Year Resident, Department of Ophthalmology, SRMS IMS, Bareilly, U. P.
2Professor, Department of Ophthalmology, SRMS IMS, Bareilly, U. P.
3Professor, Department of Ophthalmology, SRMS IMS, Bareilly, U. P.
4Senior Resident, Department of Ophthalmology, SRMS IMS, Bareilly, U. P.
5Assistant Professor, Department of Ophthalmology, SRMS IMS, Bareilly, U. P.

ABSTRACT

Iris melanoma is a rare ocular tumour, which can be detected early in its development. This tumour is almost always unilateral and arises usually from a pre-existing naevus. Failure to detect it may be associated with morbid ocular and systemic complications, yet there are successful therapies to treat this condition, if detected early.

CASE HISTORY

A 60 year old female patient presented to the eye clinic with symptoms of gradual diminution of vision RE eye for about 8 months. Slit-lamp examination revealed a brownish mass occupying almost entire pupillary area in the RE visual acuity was perception of light RE with inaccurate projection of rays and 6/9 LE.

DISCUSSION

Treatment modalities for iris and iridociliary melanomas are iridectomy, iridocyclectomy, proton beam irradiation and ruthenium-106 plaque radiation therapy. Iridectomy tends to cause photophobia, glare, traumatic cataract, vitreous loss, haemorrhage and incomplete tumour excision, while cyclectomy may cause lens subluxation, cataract, hypotony, retinal detachment or phthisis. Proton beam therapy gives dose distributions confined to the tumour, but there is more penetration of the dose to surrounding structures. Ru-106 plaques give significantly lower doses to the optic disc and macula.

CONCLUSION

Ru-106 plaque radiation therapy is effective in the management of iris and anterior ciliary body melanomas, with low recurrence rates and absence of severe ophthalmic complications.

KEYWORDS

Iridocyclectomy, Proton Beam Irradiation and Ruthenium-106 Plaque Radiation Therapy.

INTRODUCTION

Uveal melanoma is a rare ocular tumour, which can be detected early in its development. This tumour is almost always unilateral and arises usually from a pre-existing naevus. There occurs malignant proliferation of the neuroectodermally derived iris stromal melanocytes, which replaces the normal iris stromal architecture. Failure to detect it may be associated with morbid ocular and systemic complications, yet there are successful therapies to treat this condition, if detected early. Iris melanomas may increase in size, spread into the anterior chamber and can invade the chamber angle causing a secondary glaucoma. They can also extend into the ciliary body or spread extraocularly. Aetiology is unclear, but UV light is a risk factor.

CASE REPORT

A 60 year old female patient presented to the eye clinic with symptoms of gradual diminution of vision RE eye for about 8 months. Slit-lamp examination revealed a brownish mass occupying almost entire pupillary area in the RE. Visual acuity was perception of light RE with inaccurate projection of rays. IOP RE at the time of presentation was 38 mmHg by applation tonometry and in the LE it was 18 mmHg.

Fig. 1: A 60 year old female patient clinical photograph

Fig. 2: Slit lamp picture of the anterior segment showing a growth in the iris tissue.
DISCUSSION

Uveal melanomas are the most common primary intraocular tumour in adults, most commonly occurring in the choroid. Iris melanomas represent 3–10% of uveal melanomas. Melanomas typically have low internal reflectivity, a solid tumour pattern and can often have spontaneous vascular pulsations. The B-scan ultrasound can determine the size, position and thickness of the lesion in question. Careful documentation and monitoring via photography and echography or ultrasound biomicroscopy is necessary. Lesions less than three clock hours in size have reported rates of extraocular spread of 3% at 5 years, 5% at 10 years, and 10% at 20 years with mortality rates estimated at 1–4%. If extensive growth occurs patients may present with visual loss, photopsias, or visual field alterations.

**Shields Criteria for Clinical Diagnosis of Melanoma**
- The size is greater than 3 mm in diameter and 1 mm in thickness.
- It replaces the stroma of the iris.
- Three of the following 5 features are present.

Photographic documentation of growth, secondary glaucoma, secondary cataract, prominent vascularity, or ectropion irides.

**MANAGEMENT**

**Surgical**
- The treatment of choice for growing lesions has typically been excision.
- Excision should be considered if the lesion grows rapidly or encroaches on the chamber angle or if the fine-needle aspiration biopsy specimen shows malignant histology.
- It should be complete i.e. either a sector iridectomy or an iridocyclectomy.
- An iridocyclectomy was undertaken in our case with good postoperative outcome in terms of best corrected visual acuity 6/60 and IOP 18 mmHg.

**Radiation**
- Plaque radiation therapy with palladium 103 (103Pd) has been used for these patients.
- Other modalities include proton beam irradiation and ruthenium-106 plaque radiation therapy.
- Proton beam therapy gives dose distributions confined to the tumour.
- Ru-106 plaques give significantly lower doses to the optic disc and macula.

**REFERENCES**