

Case Report

Phacomorphic Glaucoma as the First Manifestation of the Choroidal Malignant Melanoma

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Abstract

Purpose: To describe a case of choroidal melanoma with phacomorphic glaucoma as the first presentation.

Case report: A 63-year-old woman was presented with painful visual loss of the left eye. Mature cataract, flat anterior chamber and elevated intraocular pressure were noticed in clinical examination. B mode ultrasonography and CT-Scan showed a large intraocular mass. Enucleation was performed and pathological analysis was compatible with uveal melanoma.

Conclusion: The presence of mature cataract obscures the fundus view in patients with phacomorphic glaucoma. Complete ultrasonographic examination or other appropriate imaging techniques should be performed to detect potential posterior segment pathologies like a malignant melanoma among these patients.

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Introduction

Uveal melanomas are the most common primary intraocular malignant tumor in adults^{1,2}. They account for over 70 % of the malignant tumors of the eye³. The uvea is divided into three areas including choroid, ciliary body and iris. It is reported that malignant melanoma primarily involves the choroid in 90 %, ciliary body in 6 % and iris in 4 % of cases with uveal melanoma⁴.

Patients with choroidal melanoma are often diagnosed with decreased visual acuity or during routine fundus examinations⁵. Nowadays, appropriate treatment options for uveal melanomas range from observation to enucleation depending on the size and characteristics of the tumor⁶⁻⁷. Therefore, early detection of smaller uveal melanomas is highly desirable⁸.

We report a case of choroidal melanoma who presented with clinical manifestations of phacomorphic glaucoma.

Case report

The ethics committee of Baqiyatallah University of Medical Sciences approved the present report and written consent was given by the patient. A 63-year-old woman was initially presented with painful visual acuity loss of the left eye since 3 weeks ago. The visual acuity was 0.6 in the right eye and no light perception in the left eye. A moderate nuclear sclerosis was detected in the right eye and fundus examination was unremarkable. The left eye had conjunctival injection and engorged episcleral vessels with mild corneal edema (Figure 1).

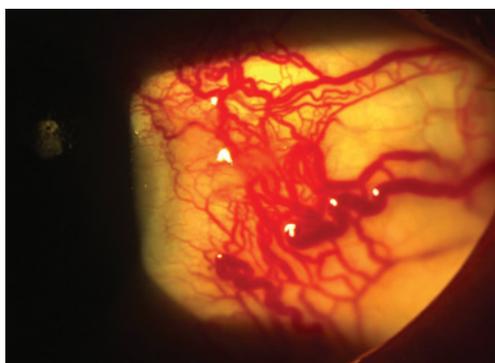


Figure 1: Enlarged and engorged conjunctival blood vessels without feeding vessels.

The pupil was fixed and dilated with iridocorneal and lenticulo-corneal touch and total loss of anterior chamber. White mature cataract was detected in the left eye that obscured the posterior segment view. Intraocular pressure was 16 mmHg in the right eye and 52 mmHg in the left eye. There was no evidence of neovascularization of the iris. Ophthalmic B mode ultrasound showed a large homogenous mass in the vitreous cavity (Figure 2). Also, orbital CT-Scan revealed an intraocular mass (Figure 3). The initial diagnosis was choroidal malignant melanoma. No evidence of distance metastasis was detected in the systemic work up. Enucleation of the left eye was performed and pathological and histochemical analysis confirmed the diagnosis of uveal malignant melanoma. (Figure 4)

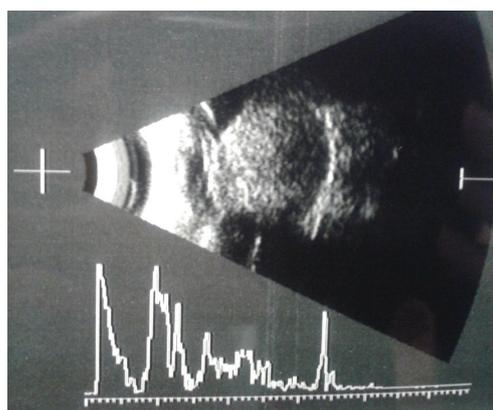


Figure 2: Ophthalmic B mode ultrasound showed a large homogenous mass in the vitreous cavity.



Figure 3: Axial CT scan image showed a homogenous intraorbital mass from lens to optic nerve head without proptosis. There was not any erosion of the orbital wall and extension.

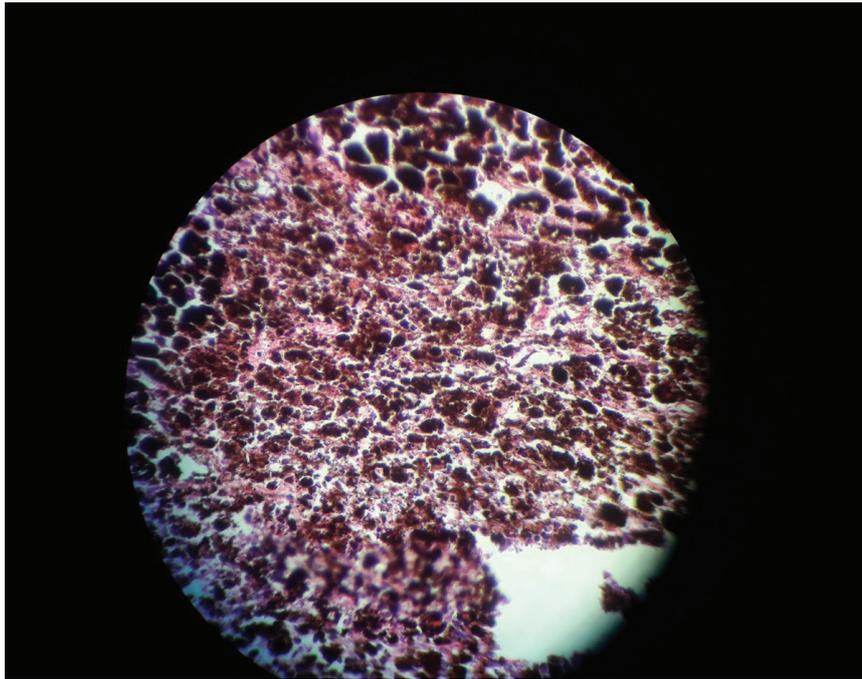


Figure 4: Malignant melanoma of choroid (Epithelioid type). Epithelioid cells with high nucleus-to-cytoplasm ratio with prominent nucleoli, mitosis and melanin pigmentation.

Discussion

Uveal tract melanomas can be divided into the lesions of the anterior tract that involve the iris, and the lesions of the posterior tract that involve the ciliary body and choroid⁹. Melanomas originating in the ciliary body or iris are often asymptomatic until a late stage¹⁰. Patients with choroidal melanoma usually present with blurred vision⁹. Painless progressive visual field loss may occur due to enlargement of the peripheral choroidal melanoma⁹. Occasionally vitreous hemorrhage may develop¹¹. Choroidal melanoma may cause painful visual loss because of acute angle closure glaucoma⁹.

Patients with phacomorphic glaucoma present with mature cataract, shallow anterior chamber and elevated intraocular pressure. Posterior segment is obscured in these patients because of the mature cataract. Ultrasonography is a useful method for evaluation of potential posterior segment pathologies among these patients.

In phacomorphic glaucoma, the swollen lens may

block the aqueous humor flow from the posterior chamber, leading to forward displacement of the iris and trabecular meshwork blockage resulting in a sudden rise of intraocular pressure¹². A large choroidal melanoma may push the lens forward, and mimic the clinical manifestations of phacomorphic glaucoma. Therefore, adequate evaluation of the posterior segment using ultrasonography or other imaging modalities is mandatory before surgical management of phacomorphic glaucoma cases.

Conclusion

The presence of mature cataract obscures the fundus view in patients with phacomorphic glaucoma. Complete ultrasonographic examination or other appropriate imaging techniques should be performed to detect potential posterior segment pathologies like a malignant melanoma among these patients.

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Footnotes and Financial Disclosures

Conflict of Interest:

The authors declare no conflict of interest with the subject matter of the present manuscript.