



One Eye Blind, The Other Swollen; Contralateral Orbital Metastasis from Choroidal Melanoma

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Clinical History

A 76-year-old male with a three-day history of pain, swelling, itching and decreased vision in the LEFT eye. Ophthalmic history was significant for RIGHT sided choroidal melanoma diagnosed and treated with plaque brachytherapy 13 years earlier. Examination demonstrated Hand Motions vision OD, 20/50 OS, left-sided exophthalmos, 2-3+ eyelid edema, 3+ chemosis OS (Fig.1). CT imaging found a 2.0 by 2.1 by 2.1 cm mass in the left orbit adjacent to the middle of the medial rectus muscle (Fig 3,4). Further questioning revealed a history of metastatic melanoma to abdomen, lung and mediastinum.

Due to the rapid progression, suspicion for aggressive malignancy prompted an urgent left orbitotomy with incisional biopsy of mass was conducted. Pathology demonstrated extensive necrosis with viable tumor staining positive for SOX10 and HMB45.

After confirming the diagnosis of metastatic melanoma, the patient urgently began 10 rounds of orbital radiotherapy. At five months post op, vision remained 20/50 OS with complete resolution of edema and exophthalmos (Fig. 2). However, he still has some irritation, redness and dryness for which he takes artificial tears BID and Erythromycin ointment qhs.

The patient was enrolled in a clinical trial for metastatic melanoma. The primary oncological medication he is currently on is IN10018 + cobi (FAK inhibitor in combination with MEK inhibitor). His systemic disease is responding.

Discussion

Uveal melanoma, involving the iris, ciliary body or choroid, occurs due to oncogenic mutations accumulated in the ocular melanocytes¹. Although metastasis of the lung, liver and bone is relatively common in choroidal

Figures

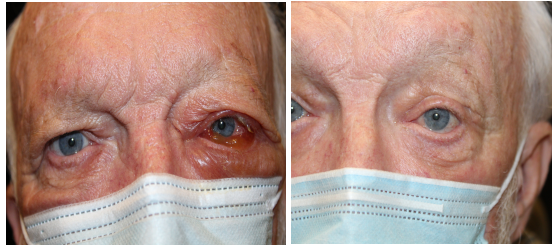


Fig. 1: Pt. during first presentation

Fig. 2: Pt. after surgery and radiation therapy.

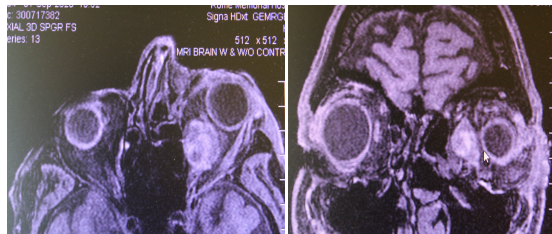


Fig. 3: Pt. MRI during first presentation

Fig. 4: Pt. MRI during first presentation

Discussion Cont.

melanoma, metastasis to the contralateral orbit, as with our patient, is extremely rare with only eight cases having been reported in the literature².

The average time of contralateral orbital metastasis varies widely with recurrence recorded as late as 42 years after, or in the case of our patient, 13 years after the diagnosis of the ipsilateral eye². This emphasizes the variability within the time frame of contralateral spread and the importance of consistent systematic screening in the years following the primary ipsilateral melanoma diagnosis.

Discussion Cont.

Signs of orbital metastasis to look for in any patient with a primary malignancy, including choroidal melanoma include increased intraocular pressure, exophthalmos, and loss of visual acuity³. Orbital metastatic melanoma can be confirmed with a biopsy looking for important biomarkers such as HMB45, S100, CAM 5.2 and/or CD68². HMB45 which was positive for our patient is a marker specifically for melanocytes and thus was critical in confirming the diagnosis.

The treatment for secondary orbital melanoma involves surgery for local resection if possible, along with chemotherapy and radiotherapy but, unfortunately, care is palliative, not curative⁴. Survival rates of such patients are also inconsistent ranging from 2 months to 5 years⁴.

Recently, immunotherapy, using drugs that improve the host's immune system to target cancerous cells, has shown promising results in improving survival of patients with metastatic melanoma⁵. With normal chemotherapy used on patients with metastatic stage 3 or 4 melanoma in, with median survival at about 7 months⁵. However, trials with immunotherapy, which includes FAK and MEK inhibitors, has shown up to 80% shrinkage in tumor in more than half of patients and median survival up to 13.6 months⁵.

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