Bilateral choroidal metastases as the initial presentation of breast carcinoma

Abstract
A 64 year old female presented with a right eye visual impairment. On examination, the visual acuity was decreased on the right side. Slit lamp examination showed bilateral non-pigmented choroidal lesions. Physical examination was unremarkable. Her past medical history included myopia, hypertension, depression and excision of a benign breast cyst 25 years earlier. On examination, the visual acuity was 6/18 (right eye) and 6/6 (left eye). Ophthalmoscopy of the left eye was normal. On the right side, there was a right-sided non-pigmented, elevated mass inferior to the right macula measuring 12.1 mm length by 2.7 mm width and a smaller non-pigmented mass superior to the left fundus. She was referred to the medical team to check for primary malignancy elsewhere. Physical examination was unremarkable. Bilateral mammogram, however, showed a space occupying mass in the upper outer quadrant of the left breast. Computed tomography (CT) of the abdomen showed two small lesions in the right lobe of the liver, CT guided percutaneous biopsies confirmed the lesions as benign liver adenomas. CT brain was normal. Colonoscopy and oesophago-gastro-duodenoscopy (OGD) were normal. Isotope bone scan showed increased uptake in the right iliac crest and iliac bone, right ischial bone, left iliac bone, right piriformis, left sacro-iliac joint, 1 in mid-thoracic vertebra, third lumbar vertebra and on the right side of the vault; features consistent with metastatic disease. Tumour markers (CA15.3, TPS, CA19.9, CEA) were normal. Chest x-ray was normal apart from some unfolding of the thoracic aorta.

Discussion
At 6 months follow-up, the lesions were no longer visible but radiation scars were noted. Visual acuity had improved to 6/6 (right eye) and 6/6 (left eye) of CMF (cyclophosphamide, methotrexate, 5-fluorouracil) chemotherapy. A 6 month course of CMF (cyclophosphamide, methotrexate, 5-fluorouracil) chemotherapy. At 6 months follow-up, the choroidal lesions were no longer present and the visual acuity had improved. She received a short course of radiotherapy to both eyes as well as a 6-month course of chemotherapy. The patient underwent mammmographically guided needle localization and excisional biopsy of the breast mass; histology showed a palpable breast lump. In our case, there was no evidence on clinical examination of the breast tumour. To our knowledge, this is the first reported case of an impalpable breast carcinoma presenting as choroidal metastases. The presentation of our patient tends to be typical of choroidal metastases: decreased visual acuity over a short period of time, visual field scotomas and photopsia. Decreased vision and pain are the most common presenting complaints (80% and 20% respectively). Patients with choroidal metastases in whom the visual acuity is not affected can be maintained on medical treatment. Otherwise, external beam radiation therapy is an efficient palliative treatment as it helps to preserve the vision and improves the patients quality of life. Other indications for irradiation of the eye include choroidal metastases that are rapidly enlarging despite systemic therapy or choroidal metastases that are associated with retinal detachment. Potential complications include cataract, retinopathy and glaucoma. Enucleation is generally reserved for patients with persistent pain. The mean survival rate of patients with ocular metastasis from systemic malignancies is poor (5 months) despite external radiation and chemotherapy. Although choroidal metastasis from breast carcinoma as an initial presentation is quite rare, a patient who presents with an ocular tumour should undergo a thorough systemic check-up and be evaluated diligently. In the management of such cases, the possibility of an underlying malignancy should be considered. Metastatic breast disease is ultimately beyond cure; the use of chemotherapy and radiotherapy can ameliorate distressing eye symptoms, and possibly avoid enucleation of the affected eye.

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