A 60-year-old female post treatment of bilateral intraductal adenocarcinoma breast presented with decreased vision and swelling in right eye. MRI brain showed enhancing right retrobulbar lesion on post contrast images encasing optic nerve without intracranial extension suggesting metastatic lesion (Fig. 1A, B). F18 FDG PET-CT scan revealed a solitary hypermetabolic metastatic deposit in right retro-orbital space (Fig 1C). She underwent partial surgical excision of retrobulbar mass confirming disease spread on histopathology. Patient responded well to chemoradiotherapy; follow up MRI scan and PET CT showed good response (Fig. 2A & B).

Most malignant deposits in the eye are due to metastases from haematogenously spread malignancies. Fahmy et al. reported that choroid was the most common site of orbital metastases (54%); and breast cancer is the most common site of primary tumour (38%), followed by lung cancer (24%) and melanoma (14%)1.

Choroidal lesions become apparent late in the course of disease and portend poor prognosis. Patients with metastatic breast cancer diagnosed from a positive orbital biopsy may have a reduced survival reported to be up to 1 year with aggressive treatment approach2,3. Multiple treatment options for intraocular metastases are available. For choroidal metastasis, radiation therapy is effective treatment without any significant side effects and good response rate in managing the metastatic lesion. In one of reported cases of choroidal metastasis dramatic response has been documented with chemotherapy4.

References


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**Abstract**

Breast cancer is the most common cancer in females and mostly metastasizes to liver, brain, bones, and lungs. It only rarely involves the choroid; signs of choroidal metastases become apparent late in the course of disease and are therefore linked to bad prognosis. These signs are often ignored as benign symptoms. Although many features may overlap with benign orbital diseases, MRI remains the modality of choice to help differentiate it from others. We present a case of a female patient who presented with visual impairment with unusual imaging features of retrobulbar choroidal metastases from primary breast cancer.

**Keywords:** Choroid metastasis, Breast cancer, F18 FDG PET-CT scan

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**Figure: 1 A, B** Axial and coronal post contrast T1 MRI showing enhancing lobulated retrobulbar soft tissue metastatic lesion (red arrow), encasement of right optic nerve (red arrow); no intracranial extension.

**Figure: 1C** Axial PET-CT fusion images showing right orbital lesion uptake (green arrow).

**Figure: 2 A** Post treatment Axial T1 contrast enhanced MRI images show good response with minimal residual retrobulbar soft tissue (red arrow). Figure: 2B Post treatment PET CT images show non-avid residual right orbital soft tissue indicating treatment response (green arrow).