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Bilateral exudative retinal detachment as an initial ocular presentationof metastatic breast cancer: A case report

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Introduction: Exudative retinal detachment (ERD), an ocular emergency and cause of painless visual loss results from defective fluid clearance from the subretinal space or excessive exudation within this space.[1,2.3] Aetiologies include inflammatory, neoplastic or vascular diseases affecting the choroid, retinal pigment epithelium (RPE) or the retina. It can also arise from effusive systemic diseases such as chronic or end-stage renal disease.[3-10]

Generally, the eye is a rare site for metastatic disease due to the absence of well-developed lymphatic system. Thus, metastases to ocular structures occurs by haematogenous route. In adult females, the most common primary site is the breast, while the lung is the commonest primary site in males.[6-10] Notably, ocular involvement in breast carcinoma is under-reported, however, with the increasing survival rates following recent advances in systemic treatment options, and improved diagnostic modalities, there has been an increase in reports of cases of ocular involvement.[6-10]The presentation could also be part of ocular paraneoplastic syndrome.[10]

We report a case of metastatic breast carcinoma presenting initially as exudative retinal detachment.

Case presentation: A 41-year-old female presented with a 9-day history of sudden profound diminution in vision involving both eyes. It started as flashes or flickering in her left eye, with hemifield vision distortion but progressively within 6 days of onset deteriorated to involve the entire visual field and the right eye. It involved both near and distant vision, however, near vision was worse. There was no history of floaters, micropsia, macropsia or metamorphopsia. She had pregnancy induced hypertension about 3 years prior to presentation but had stopped the use of antihypertensives as her blood pressure had since been stable. There was a 3 weeks history of cough with associated dyspnoea on mild exertion. She also complained of right flank pain. The patient initially reported to be well, but on further questioning with regard to comorbidities she mentioned, though hesitantly, noticing a breast lump about 1 year earlier.There was no history of weight loss or any other systemic/bodily disorder. Her aunty died of breast cancer.

Examination revealed an anxious lady with presenting visual acuity of 6/60, N36 in both eyes, with normal anterior segments. Intraocular pressures at 11:35am were 11mmHg bilaterally. Dilated fundus evaluation showed pale, smooth detached temporal retina involving the macula, worse in the left eye, with no obvious retinal breaks. The optic disc was round, pink, with distinct margins and cup-disc ratio of 0.4 and 0.3 in right eye and left eye respectively.

The fundus photographs and optical coherence tomography scans of the macula are shown in Figures 1 and 2. Chest X-ray showed bilateral nodular lung metastases.

The patient was referred to the oncologist. Cytology and immunocytochemistry of the breast lump revealed invasive breast lesion HER2 Neu-positive.

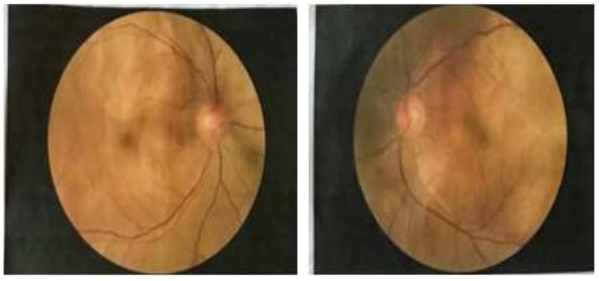

Figure 1: *Fundus photograph showing bulbous exudative retinal detachment, and no obvious tear. Right eye* (a) *& Left eye (b)*

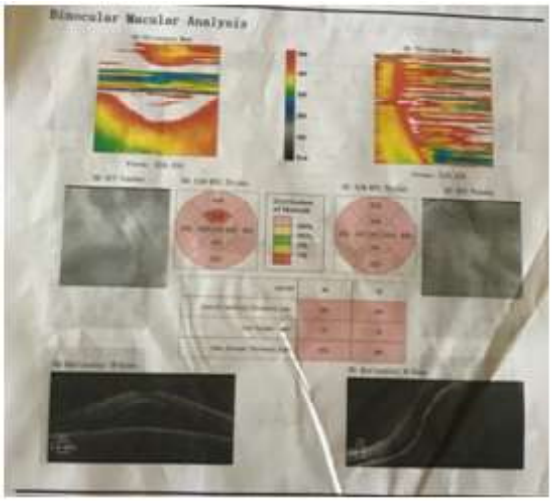

Figure 2: *Optical Coherence Tomography showing hyporeflective subretinal space with detached neurosensory retina, involving the macula*

She was commenced on systemic chemotherapy; however, she died after one course and within one month of presenting to the ophthalmologist.

Conclusion: Ocular manifestation such as ERD could be the initial form of presentation of a metastatic breast disease and may suggest disseminated multi-system involvement. The ophthalmologist should take a detailed history, perform thorough ocular and systemic evaluation to unravel the cause of ERD. Co-management with other specialties is indicated.

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