

BILATERAL EXUDATIVE RETINAL DETACHMENT SECONDARY TO BILATERAL CHOROIDAL METASTASIS OF BILATERAL BREAST CARCINOMA

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Abstract- Exudative retinal detachment (ERD) may be seen with many ocular pathologies including malignancies. Among malignant causes, metastases of breast and lung carcinoma are most common. A 50-year-old woman referred to our clinic with history of decreased visual acuity in her right eye since 3 months before referral. The visual acuity was counting fingers at 2 meters and 6/10 in the right and left eyes, respectively. On slit lamp examination, 2+ anterior chamber and vitreous reaction was detected. On funduscopy, advanced ERD of the right eye and multiple subretinal masses with ERD in the left eye were detected. On systemic work up, bilateral multiple breast masses were found on mammography. Her breast biopsy showed advanced invasive intraductal adenocarcinoma. Any patient with ERD with undetermined cause should undergo a thorough systemic work up. Prompt intervention is imperative and may be life saving.

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Key words: Exudative retinal detachment, choroidal metastasis, breast cancer

INTRODUCTION

Exudative retinal detachment (ERD) is a diagnostic challenge for ophthalmologists. It may be seen with posterior uveitis, metastatic tumors, malignant melanoma, Coats' disease, Vogt-Koyanagi-Harada (VKH) disease, retinoblastoma, choroidal hemangioma, exudative type of age-related macular degeneration (ARMD), optic pit, cryotherapy or diathermy. Among malignant causes, the most common causes are metastasis of breast and lung carcinoma. Despite various and heterogeneous causes, one should always bear in mind that a malignancy may masquerade in the pathogenesis of disease (1-3).

CASE REPORT

A 50-year-old woman referred to our retina clinic complaining of decrease in visual acuity of her right eye of 3 months duration. She had multiple outpatient visits at various eye clinics and was treated with topical and subtenon injection of steroids but her vision had decreased progressively despite these measures.

On the first examination, the visual acuity of her right eye was counting fingers at 2 meters and 6/10 in the left eye without refractive correction. There was 3+ relative afferent papillary defect in her right eye. On slit lamp examination, 2+ cellular reaction was noticed in anterior chamber and vitreous of right eye and the red reflex was markedly decreased. The intraocular pressure (IOP) was 11 mmHg without any anti-glaucoma drug. Slit lamp examination and IOP were normal in the left eye.

Fundus examination revealed advanced ERD with macular detachment in the right eye and multiple small foci of sub retinal masses and ERD in

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Bilateral exudative retinal detachment

the left eye (Fig. 1, 2). Echography showed a choroidal mass in the right eye (Fig. 3). Orbital computed tomography (CT) scan showed a suspected central nervous system (CNS) mass in the right frontal lobe and intraocular masses in both eyes.

Oncology and gynecologic counseling was done for the patient with the primary diagnosis of metastatic breast carcinoma. In her mammography multiple breast masses suspicious of malignancy were detected. Biopsy of the masses was done and histopathology exams were compatible with invasive intraductal adenocarcinoma of breast. The patient underwent systemic chemotherapy and transpupillary thermotherapy (TTT) of both eyes. Despite these measures the general condition of the patient gradually deteriorated and she died 6 months after the diagnosis due to disseminated involvement.

She gave us informed consent to publish her case and detailed history.



Fig 1. Fundus examination showed exudative retinal detachment of the left eye.

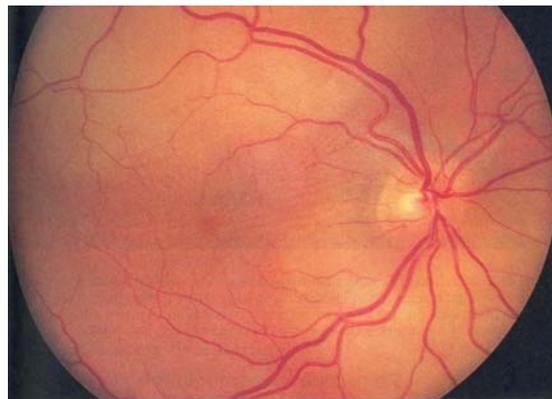


Fig 2. Exudative retinal detachment of the right eye.

DISCUSSION

Metastatic malignancies are the most common intraocular tumors in adults. Among metastatic ocular malignant tumors, breast and lung adenocarcinomas are the most common in women and men, respectively.

Breast malignancies are usually diagnosed before metastasis to the eye. In cases that manifest the symptoms of ocular involvement before diagnosis of the primary tumor (like this case) the prognosis is worse (1). Demirci *et al.* reported 264 cases with uveal metastasis secondary to breast carcinoma (2). The most common cause of referring to the eye clinics was visual impairment (93% of patients). Despite multiple treatment modalities the systemic prognosis was poor and 1-year survival was seen in 62% and 5-year survival in 24% of patients. The prevalence of involvement of different parts of uveal tract was as follows: iris in 9%, ciliary body in 2% and choroids in 88% of patients (3). Mose *et al.* compared the prognosis of bilateral versus unilateral breast carcinoma and found that there was no statistically significant difference between the two groups in a 10-year follow up (4). However the recurrence and metastasis were more prevalent in bilateral cases.

Recently, magnetic resonance imaging (MRI) has been mentioned as a helpful diagnostic modality in ocular metastasis (5). Compared to vitreous, the lesion is hyperintense in T1 and hypointense in T2 view (5). The treatment modalities are systemic chemotherapy, hormone therapy, plaque radiotherapy or external beam radiotherapy and TTT (1, 6, 7).

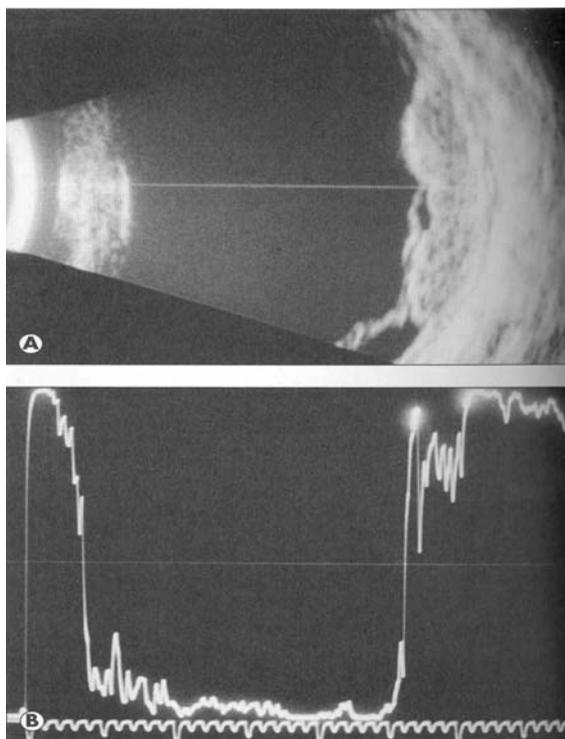


Fig 3. B scan and A scan of the right eye shows large sub-choroidal mass compatible with choroidal metastasis.

In conclusion, as choroidal metastases are one of the most common causes of ERD, thorough physical examination, systemic workup and oncology counseling and collaboration of an expert medical and surgical group including an ophthalmologist is mandatory for rapid diagnosis and proper treatment of ocular metastases in these patients to rescue the patient's life.

REFERENCES

1. [No authors listed]. Secondary tumors of the eye. In: American academy of ophthalmology. Basic and clinical science course: ophthalmic pathology and intraocular tumors. San Francisco: The American Academy of Ophthalmology; 2002-2003. p. 267-279.
2. Demirci H, Shields CL, Chao AN, Shields JA. Uveal metastasis from breast cancer in 264 patients. *Am J Ophthalmol.* 2003 Aug; 136(2):264-271.
3. Shields CL, Shields JA, Gross NE, Schwartz GP, Lally SE. Survey of 520 eyes with uveal metastases. *Ophthalmology.* 1997 Aug; 104(8):1265-1276.
4. Mose S, Adamietz IA, Thilmann C, Saran F, Pahnke R, Botcher HD. [The prognosis of bilateral breast carcinoma compared to unilateral breast tumor. 5- and 10-year follow-ups] *Strahlenther Onkol.* 1995 Apr; 171(4):207-213. German.
5. Lemke AJ, Hosten N, Wiegel T, Prinz RD, Richter M, Bechrakis NE, Foerster PI, Felix R. Intraocular metastases: differential diagnosis from uveal melanomas with high-resolution MRI using a surface coil. *Eur Radiol.* 2001; 11(12):2593-2601.
6. Puri P, Gupta M, Rundle PA, Rennie IG. Indocyanine green augmented transpupillary thermotherapy in the management of choroidal metastasis from breast carcinoma. *Eye.* 2001 Aug; 15(Pt 4):515-518.
7. Kiratli H, Bilgic S. Solitary choroidal metastasis managed by transpupillary thermotherapy. *Eye.* 2000 Oct; 14 Pt 5:799-800.