

An Unusual Case of Bilateral Visual Loss from Metastatic Lung Cancer

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A 61 year-old male coffee farmer presented with a history of gradual loss of vision of two years duration in his right eye. He also had a one-week history of swelling and tenderness of the right eye and gradual, painless visual loss in the left eye. There was a six-month history of intermittent fever, nausea, night sweats, anorexia, weight loss and constipation. He did not smoke nor had any chest complaints.

He had no light perception and saw no hand movements in the right and left eyes respectively. The right eye had upper lid oedema, proptosis and an external ophthalmoplegia. He had a shallow anterior chamber with inflammatory cells, a mid-dilated unreactive pupil, nuclear sclerosis and a dense vitritis which obscured the fundal view.

Examination of his left eye revealed nuclear sclerosis, vitritis and multiple choroidal lesions with overlying 'bone-spicule' like hyperpigmentation of the inferior retina associated with an exudative retinal detachment. Intraocular pressures were 34 mmHg (right eye) and 11 mmHg (left eye). B-scan ultrasonography of the right eye revealed dense vitritis and multiple areas of choroidal thickening (Fig. 1). He

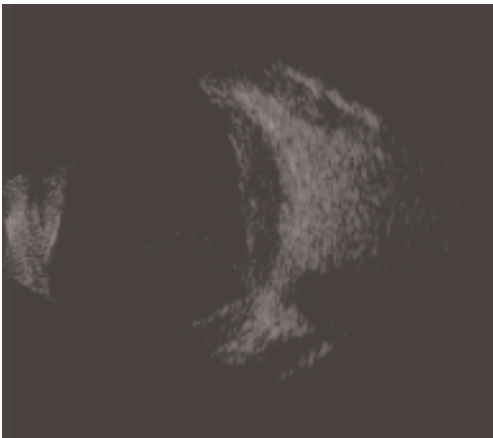


Fig. 1: B-scan ultrasound of the right eye revealed vitreous opacities and areas of choroidal thickening in the posterior pole.

was assessed as a right orbital cellulitis, glaucoma and bilateral uveitis (masquerade syndrome).

He was commenced on systemic and topical antibiotics and anti-glaucoma therapy with improvement of the cellulitis and glaucoma; however, his vision remained unchanged. His haemoglobin was 14.7 g/dL, WBC $6.7 \times 10^9/L$ and ESR 20 mm/hr (Westergren). Vitreous biopsy of the left eye revealed a few atypical mature lymphocytes. The magnetic resonance imaging (MRI) of the brain and orbits revealed areas of choroidal thickening in both eyes (Fig. 2). Computed Tomo-



Fig. 2: T1 weighted MRI of orbits with contrast showing the bilateral involvement of vitreous and choroidal thickening from the lung metastases.

graphy (CT) and MRI of the chest revealed a soft tissue mass (3.1 cm x 2.2 cm) in the lower lobe of the left lung. Magnetic resonance imaging of the abdomen showed multiple foci of lesions in the liver and adrenal, cholelithiasis and a thrombus in the inferior vena cava. This patient refused chemotherapy and defaulted from follow-up.

Intraocular metastases are the most common malignant ocular tumours with a predilection for the uveal tissue (1). The most common primary includes the breast in females and bronchi in males (1). There is a 7.1% incidence of choroidal metastasis in pulmonary carcinoma, usually occurring after at least two other organs ($p = 0.3$) have been involved in the metastasis (2). Ocular metastasis may precede the detection of the primary carcinoma in 36–58% by as long as 13 months (2, 3). Shields *et al* noted that 34% of patients with choroidal metastases had no prior history of cancer (4).

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Kreusel *et al* found that the majority of patients with intraocular metastases from lung carcinoma had unilateral, solitary choroidal lesions located at or close to the posterior pole (3). Soysal reported 54.1% had multifocal choroidal involvement, however, the primary cancer in that study was the breast (5). The low prevalence of visually asymptomatic choroidal metastasis of 2.17% has questioned the practicality of screening in cancer patients (6). Particularly as the management with external beam radiation results in 47% preserving or improving their vision but with 56% developing complications from radiation; including keratitis, dry eye syndrome, cataract and radiation papillopathy (7).

Metastatic disease of the lung can manifest as advanced bilateral choroidal metastases and may present to the ophthalmologist first. In the index case, it masqueraded as a right orbital cellulitis and bilateral uveitis. This case represents an atypical presentation of lung cancer and highlights the need for the ophthalmologist to have a high degree of suspicion as visual symptoms may be the first sign of lung

cancer. This is the first recorded case of bilateral choroidal metastasis from lung carcinoma in Jamaica.

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