

# A deadly droop: small cell lung cancer presenting as upper eyelid ptosis

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## Abstract

Orbital metastases are a rare manifestation of systemic malignancies, most commonly originating from the breast or lung in adults. Not infrequently there is not any diagnosis of cancer at the time of presentation with orbital metastatic disease. This is a case of a 62-year-old man whose initial presentation of metastatic small cell lung cancer was left upper lid ptosis and hypoglobus.

**Key Words:** Orbit, metastatic small cell lung cancer, orbital metastases, ptosis

## Introduction

Metastatic orbital lesions account for approximately 1–13% of all orbital tumors.<sup>1,2</sup> Small cell lung cancer (SCLC) is the most aggressive histological subtype of lung cancer and represents 13–20% of all new lung cancer diagnoses.<sup>3</sup> Early and rapid metastasis to multiple organ systems are typical of these tumors, but spread to the orbit is seldom reported. Outlined below is a case of a 62-year-old man whose initial presentation of metastatic small cell lung cancer was upper lid ptosis and hypoglobus.

## Case Report

A 62 year-old Caucasian man was evaluated in the eye clinic for left upper eyelid swelling and ptosis, which started a

month ago. Past medical history included diabetes and hypertension. He is a continuous cigarette smoker with a 45-pack per year history but denies symptoms of dyspnea, cough, or fever.

On examination, he had a 4cm firm left supero-temporal mass that was tender to palpation. He had a left upper lid ptosis with a superior marginal reflex distance of +4 mm and -2 mm, palpebral apertures of 9mm and 4mm, and levator function of 18mm and 9mm, respectively. Naugle exophthalmometry was 16 and 17 respectively and a 2mm of left hypoglobus was noted. A mechanical elevation deficit on the left eye was also noted. The remainder of the ophthalmic evaluation was within normal limits including normal lymph nodes on palpation.

Computerized tomography (CT) of his orbits revealed an anteriorly located left superior orbital homogenous mass that molded to the superior orbital rim and was located in close relation to the lacrimal gland (Figure 1). He underwent a left anterior orbitotomy through an eyelid skin crease approach with excision of the lesion for diagnostic purposes. Histopathology examination confirmed a metastatic small cell lung cell tumor (SCLC). Tumor cells expressed synaptophysin, chromogranin, CD 56, and focal expressivity of CK7.

Additional imaging with CT of the chest

and abdomen revealed abnormal soft tissue masses in a conglomerate measuring 5.9 x 3.4cm of the right middle lobe surrounding the main stem bronchus and abnormal lesions in the liver and adrenal glands. He was referred to oncology for staging and started on palliative treatment with thoracic radiotherapy (1500 cGy fractionated over 3 sessions) and chemotherapy consisting of carboplatin/etoposide. He responded well to treatment, showing a dramatic reduction of the lesions in the mediastinum, liver and left orbit. At 6 months follow-up he had a normal ocular/orbital examination and a resolution of his orbital/ocular symptoms (Figure 2).

### Discussion

Orbital metastasis is considered to occur in approximately 2% to 3% of patients with systemic cancer and can be the first sign of malignancy in 15-25% of patients.<sup>1</sup> Published reports indicate tumors of the breast, lung, and melanoma to be the most common primary neoplasms leading to ocular metastasis.<sup>1,2</sup> Metastases to the eye or orbit develop in approximately 0.7–12% of patients with lung cancer.<sup>3</sup> Metastases are predominantly localized in the highly vascular choroids, followed by the anterior segment, orbit/adnexa, and the optic nerve.<sup>1-3</sup>

Clinically, the most common manifestations of orbital metastasis are diplopia, proptosis, decreased visual acuity, pain, ptosis, and eyelid edema, depending on the site affected.<sup>1,2</sup> Symptoms usually occur acutely and progress rapidly over the course of weeks to months and may indicate early disease.

Cancer type and tumor histology determine the clinical course and treatment approach. The aim in treating orbital metastases is in order to relieve symptoms and discomfort. Treatment by surgical removal of the mass is not recommended, however, it is only considered for diagnostic

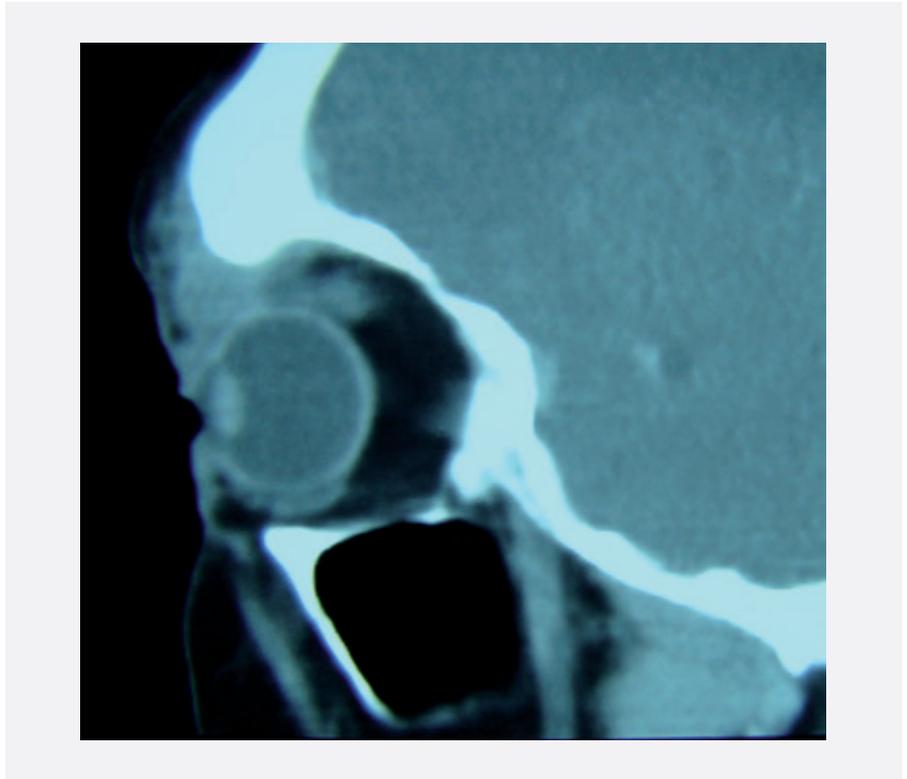


Figure 1. Sagittal CT image revealing a left superior orbital homogenous mass that molds to the superior orbital rim.

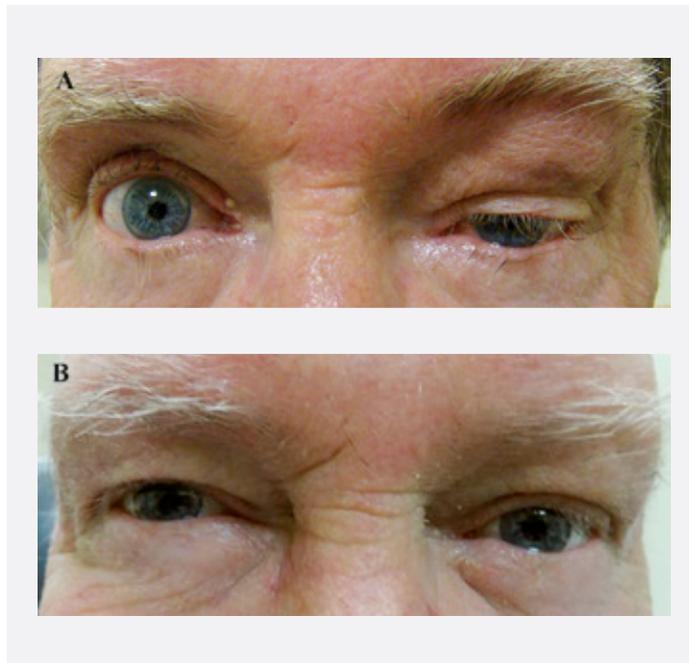


Figure 2. A, 62 year-old man with left upper eyelid ptosis, edema and hypoglobus B, 3 months post-operation showing resolution of left upper eyelid ptosis and facial symmetry.

purposes, as this case highlights.<sup>1,2</sup> After confirming the diagnosis of a metastatic SCLC, palliative fractionated radiation to the orbit is commonly employed, particularly for symptomatic patients but systemic disease is predominantly approached with chemotherapy.<sup>3-5</sup> Prognosis depends on the overall prognosis of metastatic disease and is frequently grim, with most succumbing to their disease within the first year of orbital metastases diagnosis.<sup>5</sup>

This case report highlights orbital metastasis from SCLC presenting as unilateral upper eyelid ptosis and hypoglobus. Although orbital metastases are uncommon, prevalence is likely increasing with our aging population and improved diagnostic capabilities. When orbital lesions are detected, the differential diagnosis should include secondary metastasis, in particular for those with orbital/ocular symptoms that present acutely and progress rapidly. Ophthalmologists have an important role in the diagnosis of metastatic orbital cancer, providing valuable information that can guide specific therapy for palliative care and/or potentially offer remission with advanced multidisciplinary therapies. 

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