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DIAGNOSIS OF LUNG CANCER THROUGH OPHTHALMOLOGICAL EVALUATION

LEITÃO GUERRA
OFTALMOLOGIA

Marcela Pedreira e Ataíde, Giovanna Vieira Moreira, Mariana Gouveia Bastos, Ricardo Luz Leitão Guerra.

INTRODUCTION

Lung cancer is the leading cause of cancer-related mortality worldwide[1]. Most generate metastasis to sites such as bones, brain, adrenal glands and liver[2]. Rarely, lung cancer may initially present with ocular metastasis, with an incidence of 0.1-7%[3,4], with choroidal metastasis being the most frequent type[3] due to its abundant arterial supply and a microenvironment favorable to the development of cancer cell[5]. Most uveal metastases come from carcinomas, the most common primary site in women being the breast and secondly the lung. In men, the main primary site is the lung[6].

This case report presents a patient with a choroidal tumor in the left eye as the first identified manifestation of lung adenocarcinoma metastasis.

METHODS

Case report

CASE REPORT

A 71yo female patient, previously healthy, reporting weight loss of 05 kg in 02 months, without other systemic or visual symptoms, sought evaluation for facectomy.

On ophthalmological examination: visual acuity 20/50 in both eyes. Intraocular pressure unchanged. Biomicroscopy: axial sutural cataract in both eyes. Fundoscopy: right eye unremarkable; left eye with elevated lesion, nasal topography, ill-defined borders and pigments over the lesion with 3.4mm on the vertical axis x 4.4mm on the horizontal axis.

Complementary exams were performed: retinography, autofluorescence (FAF), fluorescein angiography (FA), Optical Coherence Tomography (OCT) leading to the suspicion of choroidal metastasis. Although ultrasound is a very useful diagnostic test, including for making a differential diagnosis with other pathologies such as melanoma[7], in this case it was not useful because the test did not show changes.

Chest tomography showed a mass in right pulmonary apex with spiculated contours with adjacent parenchymal/striated bands and lymph node enlargement in the upper right perihilar region and in the mediastinum.

The anatomopathological study showed primary mixed mucinous and non-mucinous invasive adenocarcinoma of the lung. Immunohistochemistry revealed invasive adenocarcinoma.

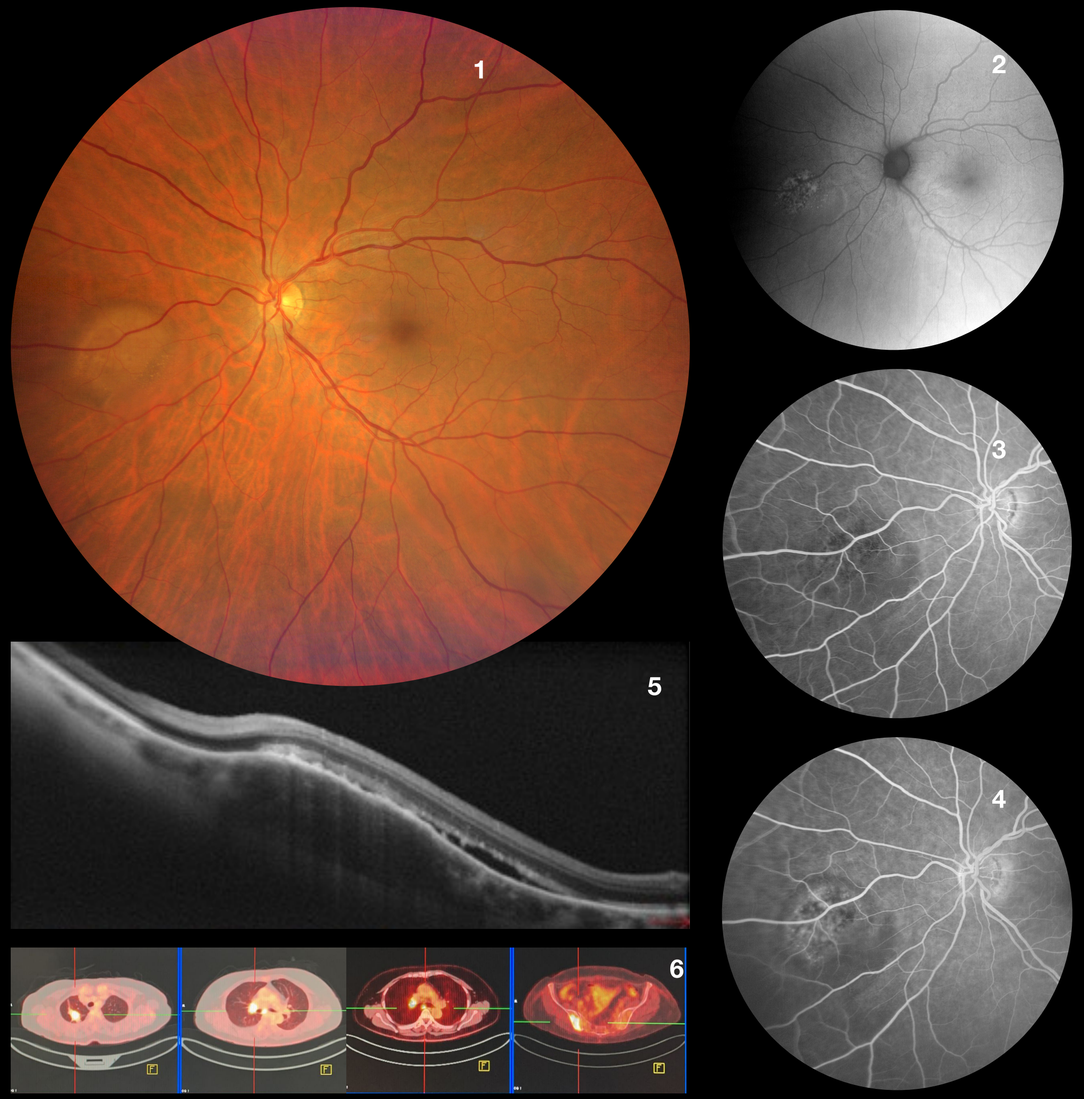

FIGURE LEGEND: 1) TRUE COLOR: Lesion with nasal topography, ill-defined borders and pigments over the lesion with 3.4mm on the vertical axis x 4.4mm on the horizontal axis **2)** FAF: mixed hypo and hyperautofluorescent with apparent adjacent detachment **3)** FA INITIAL PHASE: lesion with hypofluorescence **4)** FA FINAL PHASE: mixed hypo and hyperfluorescence **5)** OCT: choroidal lesion leading to elevation of the retinal layers associated with subretinal fluid **6)** PET-CT: mass measuring 4mm in the apical and posterior segment of the right upper lobe with irregular outline and pleural extension

CASE REPORT

Genomic profile with no actionable mutation in the first line, and the oncology team opted to start the Keynote 189 regimen (pembrolizumab, pemetrexed and carbopatine). After 04 cycles, the control PET showed a good clinical response, being chosen to continue maintenance with pembrolizumab and pemetrexed. PET CT showed a metabolic reduction of lung mass and spiculated contours in the apicoposterior region. Mediastinal lymphnode with increased expression, but with stability in size and expression of hilar lymphnodes and reduction of bone lesions. The patient remains stable from an ophthalmological point of view, with no visual complaints and visual acuity maintained. It was decided to postpone the facectomy surgery due to the treatment of lung cancer.

DISCUSSION

Shields et al analyzed 950 uveal metastases in 520 eyes of which 479 were located in the choroid. Most were female, with unilateral involvement, lesion between equator and macula, in addition to the type of primary cancer being carcinoma, as well as the patient studied. However, only 11% did not have visual symptoms at diagnosis and 34% had no previous history of primary cancer, therefore, the occurrence of asymptomatic metastasis as described is rare. Furthermore, the location in the patient's nasal topography occurred in 14% of the studied patients. It is important to consider metastatic disease in the differential diagnosis of a patient with an intraocular mass. Complementary exams and referral to an oncologist are essential for the diagnosis and treatment of cancer, which directly interferes with the prognosis and survival of the patient. In the present report, the diagnosis of cancer was made based on the ophthalmological evaluation. Only 34% of patients diagnosed with uveal metastasis have no history of a primary tumor[6], corroborating the crucial role of the ophthalmologist in diagnosis of certain malignancies[6].

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