Short communication

Orbital pulsatile metastasis as initial presenting sign of metastatic clear cell renal carcinoma

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Abstract

Case report: We present the case of a 56 year-old male with a pulsating lesion in the temporal region of the left orbit as presenting sign of a renal cell carcinoma. A review is also presented of all cases of orbital metastases diagnosed in our hospital between 1957 and 2012.

Discussion: Carcinoma is the most common malignancy involving the kidney but, only rarely does it metastasize to the orbit. As these tumors can be confused with other amelanotic or vascular tumors, a high index of suspicion is required for early detection and management of the primary tumor.

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Orbital metastases
Malignant orbital tumor
Pulsatile tumor of the orbit
Renal cell carcinoma

Resumen

Metástasis orbitaria pulsátil como signo de presentación de carcinoma renal de células claras metastásico

Caso clínico: Se presenta el caso de un varón de 56 años con tumoralción pulsátil en región temporal de la órbita izquierda como signo de presentación de un carcinoma metastásico de riñón, así como una revisión de todos los casos diagnosticados de metástasis orbitarias en nuestro hospital entre 1957 y 2012.

Discusión: El carcinoma es el tumor renal más frecuente, sin embargo, rara vez metastatiza a la órbita. Ya que estos tumores pueden confundirse con otras lesiones amelanóticas o vasculares, es necesario un alto grado de sospecha diagnóstica para la detección precoz y tratamiento del tumor primario.

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**Introduction**

Orbital metastases are rare, accounting for 2–8% of all orbital tumors. They appear in only 2–3% of patients with cancer, and their most frequent origin is breast (48%), followed by prostate (12%), skin (12%) and lung (8%). However, it is to be noted that in 11–19% of the cases, their origin is unknown and that in approximately 20% of the cases, their appearance precedes the primary tumor diagnosis. The clinical course in these patients mainly depends on the primary tumor nature; however, prognosis is poor for most of them, with a survival mean in the range of 6–9 months.

A case is presented of a 56-year-old male with a metastatic renal cell carcinoma whose only presenting sign was an orbital metastasis.

**Clinical case**

A 56-year-old male patient was admitted to our Service after being referred from another health center for the assessment of a “vascularized” lipoma on the lateral wall of the left orbit and left temporal fossa.

The patient reported no significant personal or family history.

During ocular exploration, a best-corrected visual acuity of 20/30 in both eyes was observed. The patient showed palpebral asymmetry, with reduced opening and increased fissure, due to a visible strawberry lesion in the external third of the tarsal and bulbar conjunctiva of that eye (Fig. 1). On palpation, such lesion showed pulse and continued throughout the whole temporal fossa, which made accurate delimitation thereof difficult.

The patient had no exophthalmoses or associated extrinsic ocular motility alteration. No adenopathies were detected either.

The orbital CAT scan showed a left orbit space-occupying lesion, which was extraconal and had a similar density to soft tissue. Such lesion extended throughout the lateral wall of the orbit (Fig. 2) with destruction thereof.

A diagnostic incisional biopsy was performed during which profuse bleeding was observed. The specimen histopathology test showed a clear cell carcinoma of potential renal origin (Fig. 3). The primary origin was confirmed by means of an abdominal CAT scan showing a renal tumor. Treatment with interferon-α was started, but the patient showed no response.
after three months; therefore, it was decided to administer a new cycle.

Discussion

Acquired orbital lesions appearing in middle-aged subjects and which are associated with bone destruction should let us suspect the presence of metastatic tumors. However, pulsatile proptosis is rarely secondary to orbital metastasis. In general, they are caused by vascular lesions or brain herniation toward the orbit due to a bone defect thereof. In a review performed in our hospital, we found a total of 38 orbital metastases, which account for 3% of all orbital tumors diagnosed between 1957 and 2012 (Fig. 4). The mean age was 52 years (28–89 years) and there was a higher preference for female subjects (67%). Regarding their primary origin, 13 were breast tumors (34%), 11 were unknown (29%), 3 were prostate tumors (8%), 3 were lung tumors (8%), 2 were skin tumors (5%), one was a renal tumor (3%), another was a colon tumor (3%) and another was a thyroid tumor (3%) (Fig. 5).

Renal carcinoma accounts for 3% of all malignancies and its permeation to head and neck is very rare. Organs which are likely to be affected by this type of metastasis are the lungs (50–60%), lymph nodes, bones (25–50%) and liver, although metastases have been described in almost all body organs. In 70% of the cases metastases are single, and in up to 10%, metastasis symptomatology is the first manifestation of the disease. In this case, to conclude on the diagnosis, a high suspicion is required since, due to their high angiogenic and hemorrhagic potential, they might be confused with other lesions of vascular nature.

Initial treatment of these patients has to focus on the primary tumor, since treating the orbital metastasis does not entail disease recovery. Invasive treatments, such as surgery or radiotherapy, are reserved for those cases where there is pain or loss of vision.

The prognosis in patients with orbital metastasis is poor in most cases, even when the orbit is suspected to be the only metastatically involved site. For stage IV renal carcinoma, approximately 8% of survival after five years is estimated, greatly depending on the patient’s response to treatment.

Conflicts of interest

The authors declare that they do not have any conflicts of interest.
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