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Original article

Intraocular metastasis: Comparison of clinical presentation with a known and unknown primary tumour☆

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ABSTRACT

Objective: The purpose of the present study is to review the frequency of intraocular metastases as first presentation of systemic disease, and to identify clinical and tumour characteristics.
Methods: Retrospective study of consecutive cases diagnosed of intraocular metastasis at a referral intraocular tumours unit between 1993 and 2014. General, epidemiological and ophthalmological characteristics were recorded.
Results: A total of 21 patients, with a mean age 62.7 years (31–89) were diagnosed with intraocular metastasis between 1993 and 2014. Both eyes were affected in 4 cases. Location was choroid in 20 cases. The intraocular tumour was the first manifestation of the systemic disease in 13 patients (61.9%). Primary tumour was breast in 47.6% and lung in 23.8%. Diagnosis of the primary tumour was performed by systemic studies, and only 1 patient required intraocular biopsy. Regarding the treatment, the majority of cases were controlled with systemic therapy, with 4 cases requiring additional external beam radiotherapy, and only one enucleation. No clinical differences were found between the cases with known and unknown systemic neoplasia, except in exudative retinal detachment, which was more frequent in the second group.

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Conclusions: Although intraocular metastases are the most frequent intraocular tumour, they are not a frequent cause of consultation. In more than half of the cases it is the first presentation of unknown systemic neoplasia as a solitary non-pigmented intraocular mass. Early diagnosis is crucial to establish the appropriate treatment, preserve visual function, and improve the prognosis of the patient.

Metástasis intraoculares: comparación entre las formas de presentación clínica con tumor primario conocido y desconocido

Palabras clave:
Tumor intraocular
Metástasis coroideas
Neoplasia sistémica

RESUMEN

Objetivo: El objetivo del presente estudio es revisar la frecuencia de metástasis intraoculares como primera manifestación de enfermedad sistémica e identificar las características clínicas y tumorales.

Métodos: Estudio retrospectivo y consecutivo de casos diagnosticados como metástasis intraoculares en una unidad de referencia de tumores intraoculares entre 1993 y 2014. Se registraron las características generales, epidemiológicas y oftalmológicas.

Resultados: Entre 1993 y 2014, se diagnosticaron 21 pacientes con metástasis intraoculares. Edad media de 62,7 años (31-89). Se observó bilateralidad en 4 casos y localización coroidea en 20 casos. El tumor intraocular fue la primera manifestación de la enfermedad sistémica en 13 pacientes (61,9%). El tumor primario fue la mama en el 47,5% de los casos y el pulmón en el 23,8%. El diagnóstico del tumor primario se realizó mediante estudios sistémicos y solo un paciente requirió biopsia intraocular. Respecto al tratamiento, la mayoría de los casos se controlaron mediante terapia sistémica; 4 casos precisaron radioterapia externa adicional y solamente un caso, enucleación. No se encontraron diferencias clínicas entre los casos de cáncer sistémico conocido o desconocido, excepto respecto al desprendimiento de retina exudativo, más frecuente en el segundo grupo.

Conclusiones: Aunque las metástasis intraoculares son el tumor intraocular más frecuente, no son un motivo frecuente de consulta. En más de la mitad de los casos es la forma de presentación de una neoplasia sistémica desconocida como una masa intraocular solitaria no pigmentada. El diagnóstico precoz es crucial para establecer el tratamiento adecuado, preservar la función visual y mejorar el pronóstico vital del paciente.

Introduction

Metastases are the most frequent adult intraocular malign tumours, generally appearing in 4–12% of patients with solid tumours, mainly derived from breasts or lungs and disseminated through the hematogenous pathway, generally to the uvea and affecting the choroids with greater frequency. It is estimated that metastases occur in 9% of patients with disseminated cancer and multi-organic compromise.[1–4]

Historically, ocular metastases were regarded as rare although in the last 3 decades some publications have reported increased incidence rates. Bloch and Gartner[5] found that the existence of uveal metastases was confirmed in 8% of ocular autopsies of patients with carcinoma. In similar studies of deceased cancer patients, other authors reported a mean histopathological ocular compromise of 10%, depending on primary tumour location.[6–8]

Ocular metastases appear in patients with known metastatic disease, generally with visual symptoms in the form of diminished vision, visual field defects, metamorphopsia, diplopia, red eye and pain, although they can also be asymptomatic and identified during routine examinations. The ophthalmological appearance is that of an elevated choroid lesion with poorly defined edges. It is usually amelanotic with overlying pigment patches. In addition, they can be multifocal and bilateral. The overlying retina usually appears edematous, with exudative retina detachment being a typical finding. Other signs include anterior and posterior uveitis, pigment epithelium detachment, vitreous hemorrhage, papillary edema and increased intraocular pressure.[1,3,9]

Indications for treatment include diminished vision, pain, diplopia and proptosis. Age, fellow eye condition and general patient condition are additional variables to be considered in the selection of therapeutic options in agreement with oncologists and radio therapists. Systemic therapy is indicated (chemotherapy, hormone therapy, immunotherapy, antiangiogenics) when ocular metastases appear in the context