METASTATIC BREAST CARCINOMA FOR OPTIC NERVE: CASE REPORT

CARCINOMA METASTÁTICO DE MAMA PARA NERVO ÓPTICO: RELATO DE CASO

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ABSTRACT

Introduction: Ocular metastases are underreported and, in addition, some presentations are less frequent and should be screened in an interdisciplinary way. **Case report:** This is a 59-year-old white woman, with a history of unilateral breast cancer, whose symptoms and ophthalmologic signs were manifestations that led to the diagnosis of recurrence of the disease due to ocular metastasis. **Comments:** Due to the possible asymptomatic presentation, location of the lesion and absence of a screening protocol for ocular metastases in oncological diseases, many cases of intraocular metastatic tumors are not diagnosed. After a period considered free of the disease, the patient complaints served as a stimulus for ophthalmologic evaluation. Although, many advanced intraocular tumors may be asymptomatic, this contributes to increased ocular morbidity. Ocular rare sites of metastasis may be predictor of disease severity, where, in the study, the optic nerve involvement can be observed, a rare focus of dissemination in breast cancer.

Keywords: Breast neoplasms; Tumor metastasis; Screening; Eye

RESUMO

Introdução: Metástases oculares são subnotificadas e, adicionalmente, algumas apresentações são menos frequentes, devendo ser rastreadas de forma interdisciplinar. **Relato de caso:** Trata-se de mulher de 59 anos, branca, com história pregressa de câncer de mama unilateral, onde sintomas e sinais oftalmológicos foram as manifestações que levaram ao diagnóstico de recidiva da doença por metástase ocular após seis anos de tratamento. **Comentários:** Devido a possível apresentação assintomática das lesões, localização e ausência de protocolo de rastreamento para metástases oculares em doenças oncológicas, muitos casos de tumores metastáticos intraoculares não são diagnosticados. Após período considerado livre da doença, as queixas da paciente serviram de estímulo para avaliação oftalmológica, embora, muitos tumores intraoculares avançados podem ser assintomáticos, o que contribui para maior morbidade ocular. Sítios raros de metástase ocular pode ser fator preditor de gravidade da doença.

Palavras-chave: Neoplasias da mama; Metástase tumoral; Rastreamento; Olho

INTRODUCTION

The detection of ocular metastatic tumors from breast cancer is underreported, as the eye is an uncommon site compared with bone, lung, and liver; this issue may be associated with insufficient interdisciplinary assessment of these cancers[1]. Considering that breast cancer accounts for 28% of new cases per year in Brazil and worldwide[2,3], routine screening for ocular tumor involvement or for adverse side effects of systemic treatment is not common among specialists dealing with this serious condition[4].

The most frequent primary sites of ocular metastases are malignant breast tumors in women (28.6%), and lung tumors in men (23.8%)[5]. Uveal metastasis is the most common, especially to the choroid due to the rich vascularization of the site (88.0%), and is less frequent in the orbit and optic disc. Choroidal metastases usually appear as a whitish or yellowish creamy mass, often associated with subretinal fluid[5]. Other metastasis sites, such as the brain and liver, are common and associated with disease prognosis6, in which invasive ductal carcinoma is the histological subtype most often associated with systemic spread. The literature lacks informa-

tion regarding characteristics of breast cancer metastases in the eye, and invasive lobular cancer is the one with the highest association with orbital metastases[7]. This case report presents a rare manifestation of breast cancer metastasis that was not diagnosed early, highlighting the need for stronger interdisciplinary management.

CASE REPORT

N.M.S.S.S., a 59-year-old white woman, was referred by her oncologist for an ophthalmic assessment due to progressive visual impairment in the right eye (RE) and headaches for the past three months. She had a history of unilateral radical mastectomy with lymph node dissection, followed by chemotherapy and radiotherapy for breast carcinoma six years earlier. The tumor presented the histologic subtype of papillary ductal cancer, positive for estrogen (assessed by immunohistochemistry). She was treated for five years with tamoxifen and remained under semi-annual follow-up. She also reported passive smoking exposure for 25 years. Ophthalmologic ectoscopy revealed no abnormalities in the ocular adnexa. Best corrected visual acuity (Snellen chart): RE counting fingers at 50 cm; left eye (LE) at 20/20. Biomacroscopy: incipient nuclear sclerosis in both eyes. Intraocular pressure by applanation tonometry: 12x12 mmHg (at 2 p.m., without medication). Fundus examination: 1) RE showed a whitish, vascularized lesion with regular margins at the optic disc topography, with disruption of the lamina cribrosa and tissue protrusion into the vitreous cavity, but without distortion of the retinal vascular emergence, while the macula was unremarkable; 2) LE showed a normal optic disc color and margins, normal vessels and macula. Additional ophthalmic diagnostic tests were performed (Figure 1), and the patient was referred back to her oncologist with a counter-referral describing the ocular findings and requesting further investigation for central nervous system metastases. On oncologic reevaluation, brain magnetic resonance imaging revealed multiple images consistent with brain metastatic lesions. Palliative treatment for metastatic disease was proposed, but the patient died two months later.

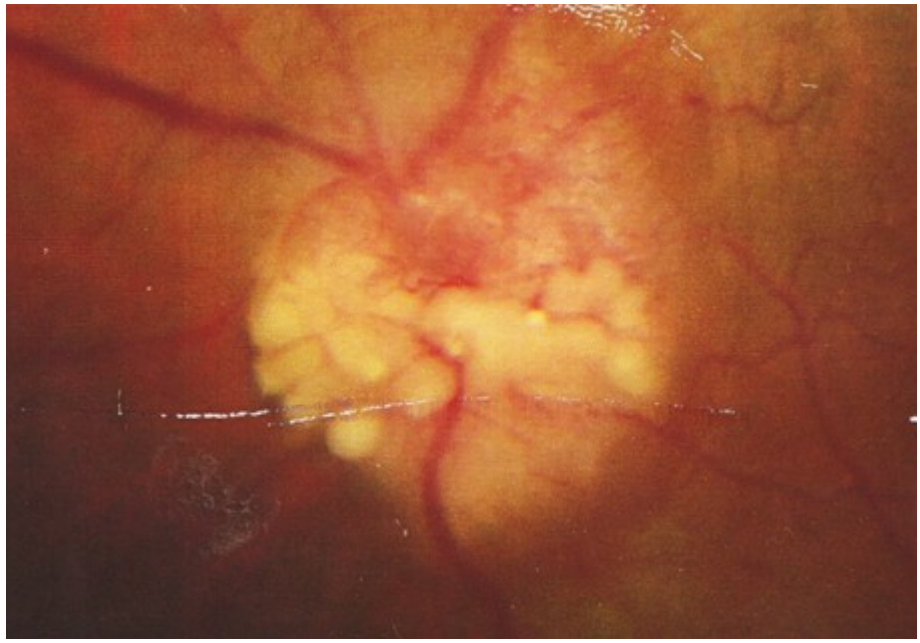

Figure 1. Color retinography. Lesion indicating metastatic carcinoma in the optic nerve.

COMMENTS

Intraocular metastases are often undiagnosed, and they may represent the initial manifestation of primary tumors[2,5,6]. Breast cancer accounts for most ocular metastases in women[2-8,9]. The site of the lesion may delay diagnosis and the timing of symptom onset. In our report, the patient reported visual impairment for over two months; this period may not correspond to the actual duration of optic nerve involvement, but served as a warning sign prompting further investigation. The lack of routine ophthalmic evaluation in cases of breast cancer highlights the limited interaction between specialists and the absence of screening protocols for ocular metastases, leading to missed opportunities for early detection[10,11]. Optic nerve involvement is uncommon, and when associated with brain lesions, it suggests metabolic similarities between these tissues, indicating greater disease severity. Although the tumor type was the most common form of breast cancer, metastasis to the optic nerve remains rare[9,11]. Early diagnosis and identification of lesion sites may enable the combination of ophthalmic interventions with oncologic management of the primary disease, potentially improving visual outcomes and survival[12,13]. However, brain metastases carry a poor prognosis, which in this case prevented timely ophthalmologic treatment due to the fatal outcome. The literature lacks information on ophthalmologic presentations that may serve as prognostic markers for this disease, highlighting the need for randomized clinical studies to assess possible associations between intraocular metastasis and factors, such as age, histological subtype, therapy received, follow-up duration, and primary tumor stages. The symptoms of the patient were paramount for the ophthalmic referral, emphasizing the importance of considering these complaints in multidisciplinary follow-up.

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