Case 3560

Ocular metastasis from breast carcinoma
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Section: Breast imaging
Case Type: Clinical Cases
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Patient: 62 years, female

Clinical History:

A 62-year-old woman with irreducible, painful exophthalmos presented at the ophthalmology clinic with double vision. Orbitonometric parameters were near the upper limits.

Imaging Findings:

The mammography showed diffuse increased left breast density due to trabecular thickening with associated ill-defined mass (diameter of 2.5 cm) localized in the omolateral upper-outer quadrant. Enlarged round axillary lymphonodes with increased density and loss of lucent fatty hilum were observed in the left axillary cavum; another lymphonode was noted in the controlateral axillary cavum. Malignant-type microcalcifications were not observed. The sonographic examination was performed with a superficial probe (10 Mhz). The examination showed in the left upper-outer quadrant an irregular and heterogenous hypoechoic mass of 2.5 cm. Near the mass were noted three solid round hypoechoic nodules (0.5 cm); one localized in the cranial portion of the left upper outer quadrant (1 cm). US scans showed marked dilated lymphatic channels, skin thickening and multiple round hypoechoic lymphonodes in the left axillary cavum (0.5 cm to 2 cm) consistent with axillary lymphadenopathy. Lymphonode in the right axillary cavum with a high longitudinal-transverse axis ratio and iperchogenic hilum consistent with flogistic node.

Discussion:

A total body multi-layer spiral CT (4 detector row CT) was performed in order to evaluate the stage. The cranial CT indicated that the right exophthalmos was due to an oval mass located in the retrobulbare space with a density comparable to soft tissue (Fig 8). The biopsy report indicated that this mass was a metastasis probably to an extrinsic ocular muscle (Ref 3). No other organs were involved. Ocular metastasis from breast carcinoma is usually located in the choriodea. Breast carcinoma rarely metastasizes to the extrinsic ocular muscles. The incidence of choriodal ocular metastases from breast carcinoma is approximately 26-37% while the incidence of other malignant systemic neoplasms is approximately 10%. Other neoplasms that can give ocular metastases are pulmonary neoplasms, melanoma, gastro-intestinal tumors, maxillary sinus neoplasms and lymphomas. Reports of the presence of ocular metastases in breast cancer in literature are rare. Specifically, only one case reporting the diagnosis of a non-palpable breast cancer after observation of a choroidal metastasis has been published (Ref 3).

Differential Diagnosis List: Mucinous breast carcinoma with retrobulbar metastases to the right eye.

Final Diagnosis: Mucinous breast carcinoma with retrobulbar metastases to the right eye.
References:

Susan G. Orel, MD, Nicole Kay, BA, Carol Reynolds, MD and Daniel C. Sullivan, MD. BI-RADS Categorization As a Predictor of Malignancy. Radiology 1999;211:845-850.


Figure 1

Description: normal breast
Origin:
Description: high-density mass, with irregular margins, partially superimposed by breast parenchyma, located between the two inferior quadrants. Polymorphic microcalcifications are present. Origin:
Description: polymorphic microcalcifications within the high-density mass Origin:
Figure 3

Description: normal breast

Origin:
Description: The breast mass, seen in the left oblique projection, extends posteriorly to the pectoral muscle. Origin:
Description: high-density and irregular mass in the inferior quadrants Origin:
Figure 6

Description: hypoechoic and heterogeneous mass with polilobulated and irregular margins and posterior acoustic shadowing. **Origin:**

**b**

Description: Unorganized vascular structure within the lesion. Spectral analysis gave an arterial-type signal. **Origin:**
Description: A small hypoechoic nodule in the left inferior-external quadrant in the periareolar area
Origin:
Figure 7

a

Description: skin thickening, ectasic lymph vessels and hyperechogenic aspect of the subcutaneous fat

Origin:

b

Description: rounded hypoechoic lymph node in the left axillary cavity

Origin:
Figure 8

Description: oval mass located in the right retrobulbar space with a density comparable to soft tissue.
Origin: