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METASTASES IN THE BREAST FROM DISSEMINATING MELANOMA

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Key-word: Melanoma

Background: A 44-year-old female was referred to our hospital with a palpable mass in the left breast. Upon physical examination, a tumor was detected in both the left and the right breast.

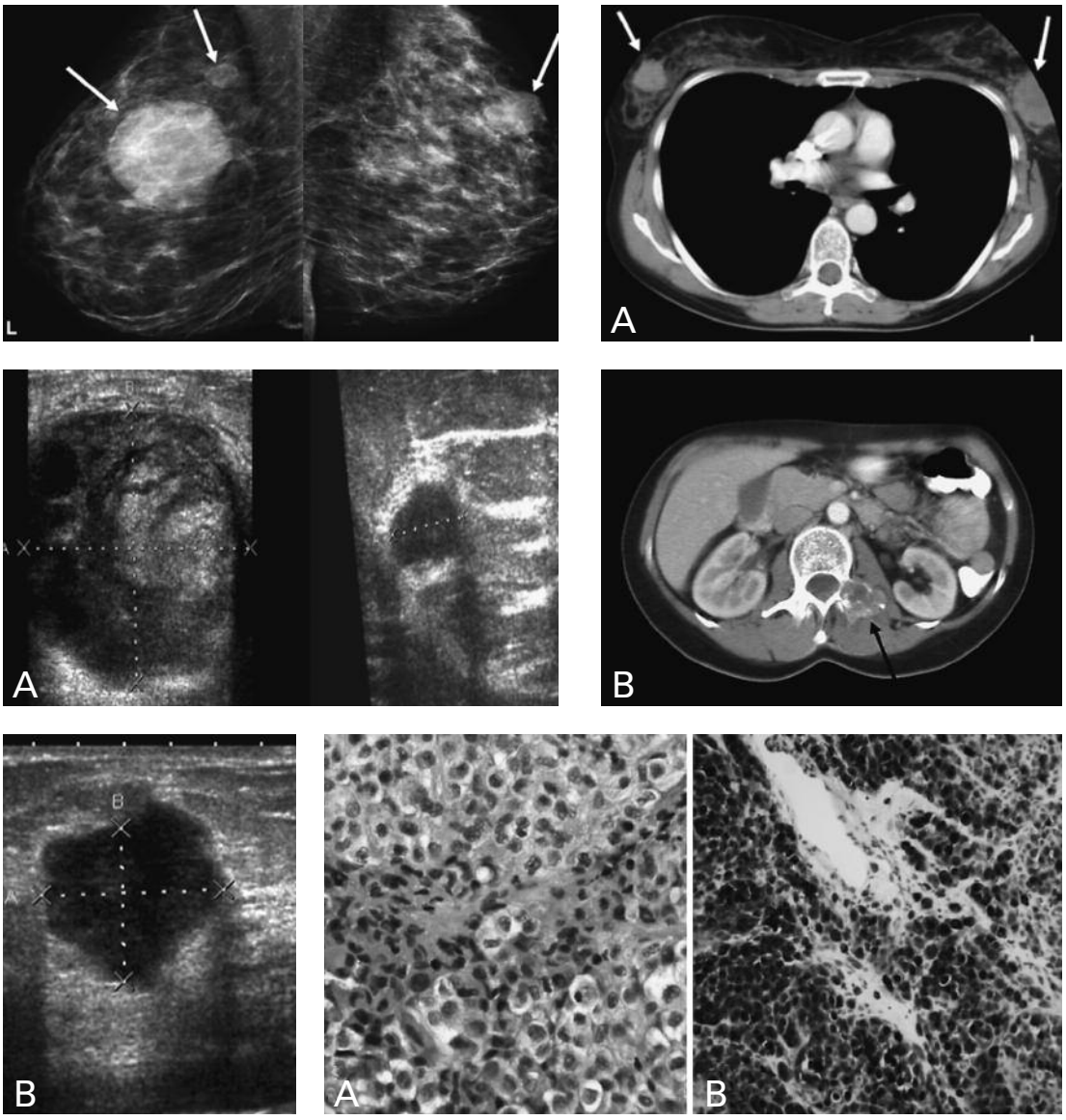

Fig. 1 | 3A
2A | 3B
2B | 4A | 4B

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Work-up

Mammography of the breasts (Fig. 1) shows two masses on the craniolateral view of the left breast. The dominant rounded mass corresponds to the finding during physical examination. Laterocranial to this lesion, there is a second lesion which was not detected during palpation. On the craniolateral view of the right breast, one rounded lesion with ill-defined margins, corresponding to the palpable mass, is seen.

Ultrasonography of the breasts (Fig. 2) shows on A (left breast) two lesions. The dominant lesion has a diameter of 3.6 cm and appears inhomogeneous. The second lesion of 1 cm in diameter has an hypoechoic appearance. In the right breast (B), a hypoechoic 2 cm lesion with ill-defined margins is seen.

CT scan of the thorax and abdomen (Fig. 3) demonstrates nodular opacities in both breasts, suspicious for metastases (A). Metastases are also present in the left pedicle and dorsal elements of the second lumbar vertebra (B).

Microphotographs of the lesions after biopsy (Fig. 4) is representative for all three lesions (A: with Hematoxyllin-eosin stain, B: with Melan-A, a marker for melanoma). Cells with large, irregular and hyperchromatic nuclei are present. The cells are positive for Vimentine, Melan-A and S100. HMB45 is partially positive. The hormone receptors for estrogen and progesterone are negative.

Radiological diagnosis

Pathological examination of the three biopsies taken under ultrasound guidance indicated that the masses in the breasts were *metastases of melanoma*. This diagnosis was supported by the medical history of the patient. The patient had undergone excision of melanoma (Breslow thickness 2.99 mm) 2 years previously, with a positive sentinel node under the right arm.

As mentioned, the patient also had bone metastasis in the lumbar spine at the occasion of the current consultation.

Being diagnosed with multiple metastases from melanoma, the patient died after 5 months.

Discussion

The female breast is associated with many diseases. From the oncologic point of view, it is not only a host of benign and malignant tumors of breast glandular parenchyma, but can also be a site for metastasis disseminating from various tumors.

The most common primary tumors which metastasize to the breast are lymphoma and malignant melanoma.

Metastasis to the breast from malignant melanoma or other extra-mammary neoplasm is rare. Its incidence ranges from 1.3 to 2.7% of all breast malignancies. However, this complication is being encountered with greater frequency, due to the increasing incidence of malignant melanoma. Therefore, special attention should be given to breast masses or abnormal imaging study of the breasts presenting in patients with a history of melanoma. Especially for further treatment, the diagnosis of metastasis of melanoma is of great importance, since the finding of metastasis in the breast constitutes a poor prognostic sign.

Close follow-up is recommended to ensure correct management of these patients, in order to avoid unnecessary procedures with no benefit to the patient whose survival is usually less than one year.

Bibliography

1. Bassi F., Gatti G., Mauri E., et al.: A. Breast metastases from cutaneous malignant melanoma. *Breast*, 2004, 13: 533-535.
2. Ravdel L., Robinson W., Lewis K., et al.: Metastatic melanoma in the breast: A report of 27 cases. *J Surg Oncol*, 2006, 94: 101-104.