

PRIMARY MALIGNANT MELANOMA OF THE BREAST

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SUMMARY

The breast is an unusual site for primary or metastatic malignant melanoma. One case of primary malignant melanoma is reported and a review of this kind of tumor is presented.

The female breast is one of the structures most frequently involved in proliferative processes either benign or malignant.

Malignant melanoma is a common tumor and can develop in many sites. Yet, it is surprising how rare are the reports on the primary (two cases) and metastatic (ten cases) malignant melanomas of the breast.

This report concerns one case of primary malignant melanoma of the breast and a review of the medical literature is presented.

CLINICAL HISTORY

G. G., a 76-year-old woman was admitted to Hospital de Santa Maria on February 7, 1973, because of a tumor she had discovered two months earlier in her left breast.

In the history, two myocardial infarctions nine and eight years previously stand out. She had no operations.

On physical examination the patient was in good general condition. The breasts were large and flat, without skin or nipple changes. The left breast contained in its lower inner quadrant a well-circumscribed tumor. It was 2.5 cm in diameter, spherical, soft, unattached to the skin, movable on the underlying tissues and moderately painful on examination. No axillary enlarged lymph nodes were found.

The remainder of the physical examination was within normal limits, except for pronounced loss of vision in left eye and a blood pressure of 180/110 mm Hg.

Laboratory findings were normal, except for a blood sedimentation rate of 70-41 mm. Roentgenograms failed to reveal metastatic lesions of lungs and bones.

A modified radical mastectomy was performed, nine days after admission to the hospital.

PATHOLOGIC FINDINGS

Gross Description

The tumor was spherical with a 2.5 cm diameter and it was not encapsulated. The tumor tissue was very moist and dark brown in appearance.

Microscopic Examination

The tumor cells formed a meshwork of spindle-shaped cells (Fig. 1) most of which showed heavy granular pigmentation with melanin as we can see in the Fontana-Masson method (Fig. 2). The tumor cells are fusiform and lie in irregular strands. Mitotic figures are uncommon. The tumor is not encapsulated and invades the surrounding fat (Fig. 3). Masses of tumor cells are adjacent to the normal lobular architecture of the breast (Fig. 4). The mammary lobules are atrophic and show intralobular fibrosis.

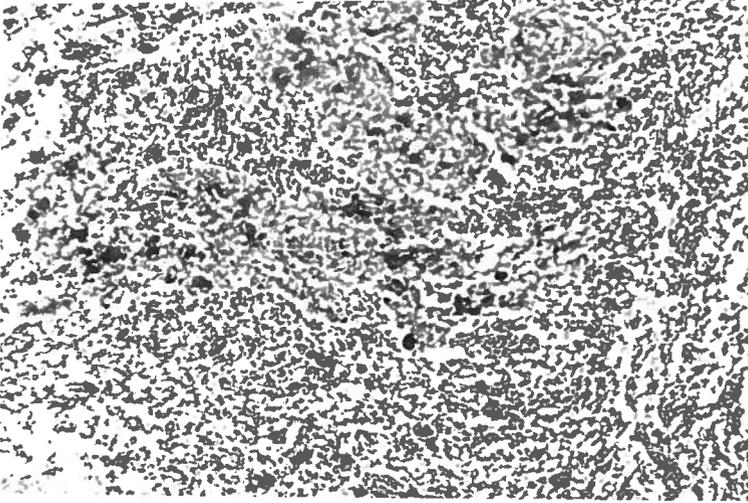
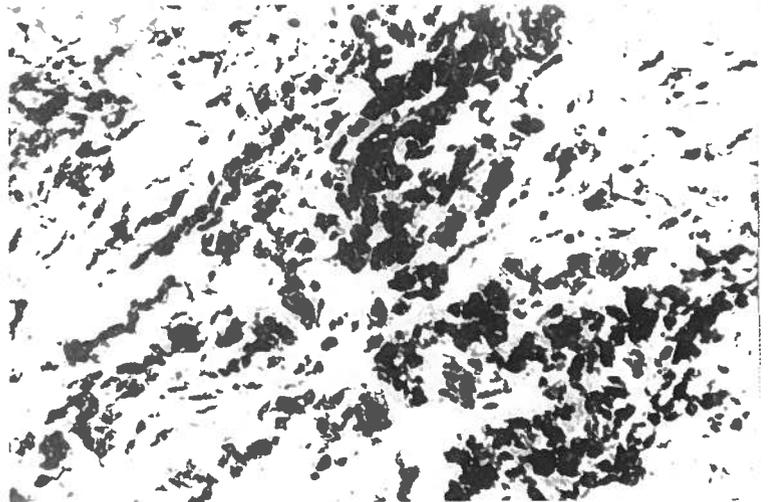


Fig. 1 — Section of the tumor with spindle-shaped cells, most of which showed granular pigmentation (H. and E. $\times 150$)

Fig. 2 — Melanin in the tumor cells (Fontana Masson $\times 240$)



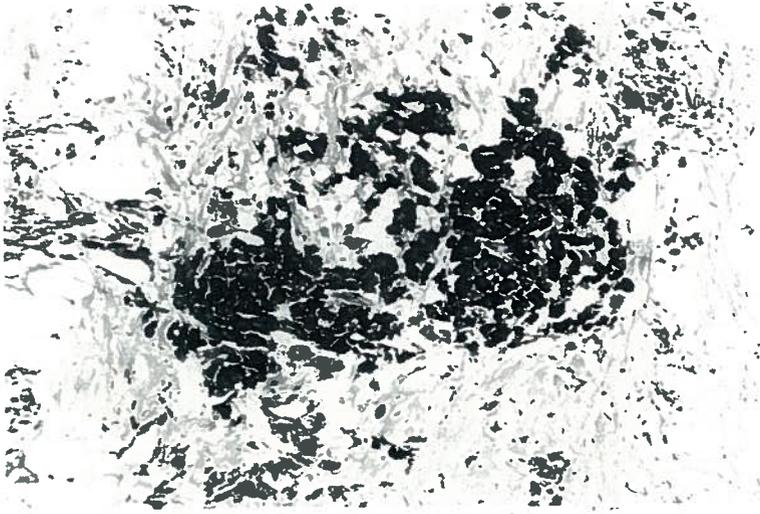


Fig. 3 — Invasion of the fat surrounding the tumor (H. and E. $\times 150$)



Fig. 4 — Tumor cells adjacent to the normal lobular architecture of the breast (H. and E. $\times 150$)

POSTOPERATIVE EVOLUTION

The patient did well after operation and was discharged on the seventh postoperative day.

Careful examinations made by dermatologists and ophthalmologists failed to reveal any areas suggestive of a primary malignant melanoma.

A check-up three months later revealed a subcutaneous nodule of the right lateral chest wall. An excisional biopsy was made (Fig. 5) and the lesion proved to be a metastasis of malignant melanoma.

In November 1973, after a short period of monochemotherapy as an outpatient, she showed symptoms of widespread metastasis and died on January 26, 1974.



Fig. 5 — Gross appearance of the metastatic nodule of the right lateral chest wall

COMMENTS

As we stated above, malignant melanomas either primary or secondary to the breast are very infrequent, though this kind of tumor is common in many other locations. According to Willis,¹ in almost all cases either a minute tumor of the skin or eye exists, or a skin tumor was excised in the past and forgotten.

Das Gupta, Bowden and Berg² advanced the possibility that primary melanomas of the skin disappear spontaneously, their metastases being the only clinical finding.

The two cases of primary malignant melanoma of the breast reported in the literature had different courses.

In the case reported by Gatch,³ a 52-year-old woman was submitted to a right simple mastectomy in 1944, because of a tumor of two year's duration. Suggestive lesions of a primary melanoma of the skin or mucous membranes were excluded as well as previous operations. Three years later (1947) she was found to have a small bowel obstruction due to a metastasis and was operated on. She did well till 1956 when she underwent a laparotomy owing to a rectosigmoidal carcinoma.

No melanoma metastases were found in her abdomen and the physical examination was equally negative.

Stephenson and Boyd⁴ reported the case of a 26-year-old woman who was admitted to the hospital with a complaint of *breast tumors*. Two years previously

she had noted a slowly enlarging mass in her left breast. On the physical examination after admission, the right breast was three times normal size, had inflammatory signs and *peau d'orange* skin changes. The left breast contained the original tumor. There were subcutaneous nodules in the suprasternal area, right arm and bilateral soft axillary nodes. Pelvic examination revealed fullness in the left adnexal area.

The subcutaneous lesion on the right arm was excised and proved to be a metastatic amelanotic melanoma.

Bilateral simple mastectomy and bilateral salpingo-oophorectomy were performed. The patient died five months later with widespread metastases.

From the ten reported cases of secondary melanoma of the breast, in nine of them the primary tumor was located in the limbs and in the remaining one in the skin of the posterior chest wall — Charache,⁵ one case; Charache,⁶ three cases; Sandison,⁷ one case; Marques,⁸ three cases and Pressman,⁹ two cases.

Comparatively to the two previously reported cases, our patient had some characteristics which must be emphasized:

1. She was older (76 years old) than Gatch's patient (52 years old) and Stephenson's one (26 years old).
2. She underwent surgery, and the histological diagnosis was so established, two months after the clinical manifestations were first noted. In the other two cases two years had elapsed.
3. A different location for a primary melanoma was carefully excluded, and besides our examination, she was sent to specialists of the Dermatological and Ophthalmological Departments.
4. Though treatment was precociously instituted, the course of the disease was rapidly fatal as it is common in this kind of malignant tumors.

RESUMO

A glândula mamária constitui uma localização muito rara para o melanoma maligno (primário ou metastático).

Descreve-se um caso de melanoma maligno primário da mama e apresenta-se uma revisão bibliográfica relativa a este quadro patológico.

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