Osteosarcoma of the Breast

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Summary. Osteosarcoma of the breast is an unusual neoplasm. The authors describe such a tumour found in a 38 year old woman. The neoplasm developed rapidly within 5 months of the patient’s first observation. Histological study revealed extensive fibroadenomatous tissue with osteosarcomatous metaplastic foci. The tumor rapidly recurred and was then composed exclusively of sarcomatous tissue. The patient died 15 months after first recognition of the tumor probably from generalized metastases. The epithelial and mesenchymatous origin of osseous metaplasia within (phylloid) fibroadenoma is discussed.


The rarity and controversial histogenesis of osteosarcoma of the breast prompt us to present a new observation on this subject.

Case History

Five months before medical consultation, Mrs. Rosa C., 38 years old, fell at home, knocking her left breast against a stool. During the following days, a haematoma formed in that region, which disappeared. Four months after the accident, the young woman noticed a rapidly growing nodule in her left breast painful to the touch. Medical examination revealed a firm induration in the supero-internal region of the left breast, about 6 cm in diameter, adhering to the deeper layers but not to the skin. No palpable axillary lymph nodes.

The mammography showed nodular shadows, partly calcified. From an extemporaneous biopsy we diagnosed a phyllod fibroadenoma with malignant osseous metaplasia. Radical mastectomy, according to Halsted, was performed only 6 weeks later. After two months, a tumoural invasion of the remaining external mammary and left axillary tissues was noticed and subsequent radiotherapy was carried out (5950 r). Seven months after the first diagnosis, two pulmonary metastases and pleural effusion were discovered. The patient returned to her native country where she died eleven months after tumour onset. There was no autopsy.

Macroscopy. 1. The extemporaneous biopsy (T 4320/70) consists of mammary tissue measuring 8 cm in its greatest dimension and contains a firm whitish nodule of $4 \times 2 \times 2$ cm, partially haemorrhagic with small beige foci grating under the knife.

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Fig. 1a and b. C. Rosa, 38 years. Biopsy of left breast. T 4320/70, HE, 160:1. a (left): Phylloid fibroadenoma. Regular, hyperplastic epithelial wall. b (right): Area of malignant osseous metaplasia

Fig. 2. C. Rosa, 38 years. Residual tumour after biopsy. T 5053/70, HE, 160:1. Osseous strands, partially calcified, marked nuclear and cellular atypia