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Keloid-type of fibromatosis-like metaplastic carcinoma of the breast with transformation into biphasic tumor in recurrences and lymph node metastases

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Keloid type of fibromatosis-like metaplastic carcinoma of the breast with transformation into biphasic tumor in recurrences and lymph node metastases.

Sir,

metaplastic carcinoma of the breast with fibromatosis-like pattern of growth is a recently described type of breast carcinoma¹. It was originally thought that such tumors exhibited a high risk of local recurrence but **showed** no tendency to distal spread. In the second published series following the original report, it **has been demonstrated** that these tumors may occasionally metastasize distantly but not, as also shown in the first study, to the axillary lymph nodes². Morphologically, fibromatosis-like pattern of growth was the only observed pattern but in some cases a minor (less than 5 %) glandular or squamoid component was also present¹⁻². Histological features of recurrent tumors were similar to the initial one¹. Here, we report a case of fibromatosis-like metaplastic carcinoma with unusual morphology that progressively changed in several recurrences and metastasized to axillary lymph nodes and also distantly.

The patient was a 48-year-old woman with a lump in the left breast of recent onset. On aspiration cytology, the tumor was suspicious for malignancy. It was excised and diagnosed as spindle cell tumor, possibly infiltrating myoepithelioma. **Excisional margins were free of tumor**. No immunohistochemistry was performed since it was not available at that time. Two years later, tumor locally recurred, was excised, only to recur one year later. The patient refused mastectomy, so the tumor was only excised and recurred again 10 months later; simple mastectomy was performed. One and a half year later, a recurrent tumor appeared in a postmastectomy scar. It was excised together with the three enlarged axillary lymph nodes. At the same time, pulmonary metastases were demonstrated **on** X-ray. Thoracic region was postoperatively irradiated and chemotherapy was introduced. Despite such treatment, the disease ran a downhill course, pleural effusion and skeletal metastases appeared and the patient died in respiratory failure, 6 years following initial surgery.

Grossly, the initial tumor was well delineated, white-gray, firm, and measured 1 cm in diameter. Histologically, it was mostly paucicellular with abundant keloid-like hyalinized collagen matrix with some entrapped preexistent breast ducts surrounded by numerous plasma cells. Keloid-like collagen fibres only focally showed some fascicular arrangement, they were largely distributed haphazardly (Figure 1 A). Tumor cells were ovoid to spindle, with minimal pleomorphism (Figure 1 B), only focally denser and slightly pleomorphic. Mitoses were extremely rare. No epithelial structures or epithelioid cell nests were found; tumor was embedded in its entirety. The first recurrent tumor was morphologically similar to the primary, while in the second recurrence focal neoplastic tubular/ductal structures appeared in otherwise predominantly spindle cell tumor with keloid like matrix (Figure 1 C). In the mastectomy specimen, such epithelial formations of low to intermediate grade malignancy were more numerous, focally cribriform, while spindle cell component was generally more cellular, less collagenized, with focal pseudovascular retiform structures; tumor infiltrated skin and underlying skeletal muscle. In 2 of 3 lymph nodes excised together with postmastectomy scar recurrence metastases were seen, showing predominantly epithelial component with some foci of condensed ovoid to spindle tumor cells without or minimal keloid-like collagen (Fig 1 D). Immunohistochemical reactions performed on a later date on primary and recurrences, showed strong diffuse cytokeratin 5, 14, and MNF116 reactivity of spindle cells in all tumors (Fig 2 A- B), while luminal cytokeratin 18 was only positive in ductal epithelial structures. In addition, neoplastic spindle cells also showed positive reaction, although less extensively, for smooth muscle actin, and for p63. Estrogen and progesterone

receptors and HER-2 were negative in spindle cell component but estrogen receptors were positive in ductal epithelial component of recurrent tumors.

Although morphological spectrum of fibromatosis-like metaplastic carcinoma of the breast is well recognized and its clinical behaviour mostly agreed upon¹⁻⁴, our case deserves recognition for the following reasons:

1. initial tumor presented as a pure spindle cell lesion with unusual keloid-like matrix what is also rarely seen in fibromatosis proper⁵.
2. well to moderately differentiated neoplastic ducts and tubules that were not present in the primary appeared in recurrent tumors **producing a biphasic morphologic appearance.** (subsequently becoming more numerous; spindle cell tumor apparently “differentiated” into histologically obvious carcinoma)- **deleted**
3. contrary to previous claims, lymph node metastases in fibromatosis-like metaplastic carcinoma are possible, if only after repeated recurrences, **with less obvious spindle cell component.** (4. while spindle cell component of the tumor was triple (ER, PR, HER-2) negative, differentiated ductal component was estrogen receptor positive; we are not sure if this finding may in any way influence treatment procedures) - **deleted**

1. Gobbi H, Simpson JF, Borowsky A, Jensen RA, Page DL. Metaplastic breast tumors with a dominant fibromatosis-like phenotype have a high risk of local recurrence. *Cancer* 1999; **85**; 2170-2182.
2. Sneige N, Yaziji H, Mandavilli SR, et al. Low-grade (fibromatosis-like) spindle cell carcinoma of the breast. *Am. J. Surg. Pathol.* 2001; **25**; 1009-10016.
3. Kinkor Z, Svitakova I, Ryska A, Kodet R, Hrabal P. Metaplastic spindle-cell (fibromatosis-like) carcinoma of the breast – report of 4 cases. *Cesk. Patol.* 2002; **38**; 164-168.
4. Schafernack KT, Policarpio-Nicolas ML, Wiley EL, Laskin WB, Diaz LK. A 56-year-old woman with a spindle cell lesion of the breast. Low-grade (fibromatosis-like) spindle cell carcinoma of the breast. *Arch. Pathol. Lab. Med.* 2006; **130**; e81-83.
5. Weiss SW, Goldblum JR. Fibromatoses. In Weiss SW and Goldblum JR eds. *Enzinger and Weiss's soft tissue tumors*. Fifth edition. Mosby-Elsevier, 2008; 227-302.

Legend to Figures

Figure 1. A, Low power view of the initial fibromatosis-like carcinoma with abundant keloid-like matrix and some entrapped preexistent small ducts. B, Higher magnification to show oval to spindle tumor cells of deceptively benign morphology. C, Ductal neoplastic elements admixed with fibromatosis-like component in the second recurrence. D, Lymph node metastasis with ductal component (right-hand side) and condensed ovoid to spindle cell component (left-hand side).

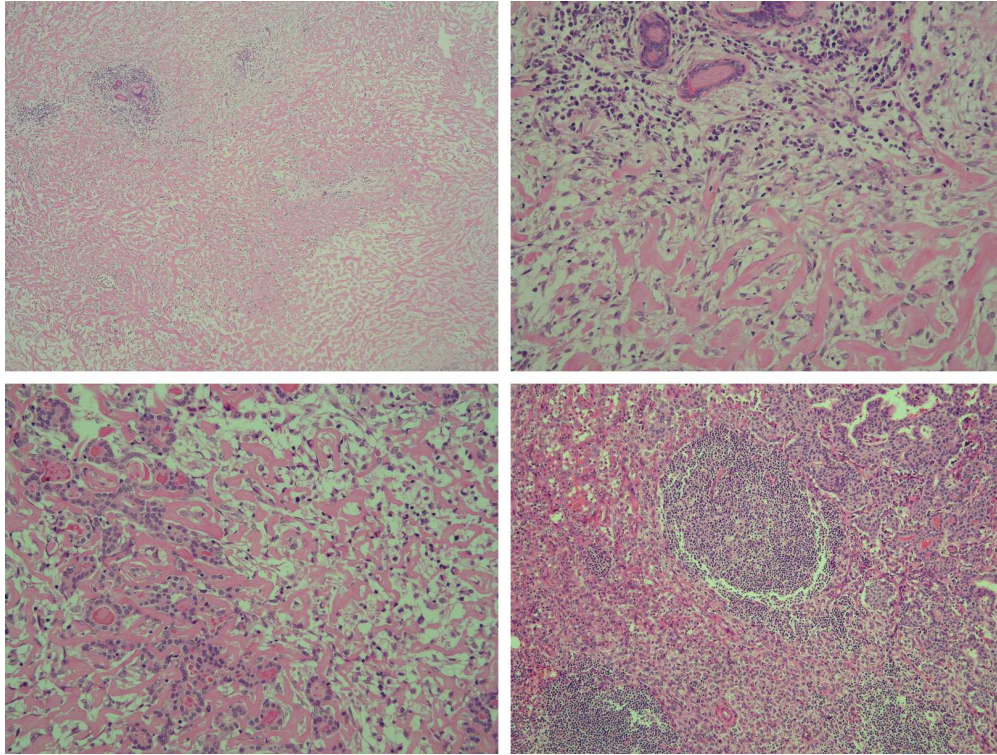
Figure 2. A, Strong positivity of spindle cells for MNF116. B, CK5 positive reaction of spindle cells and lack of it in ductal cells.

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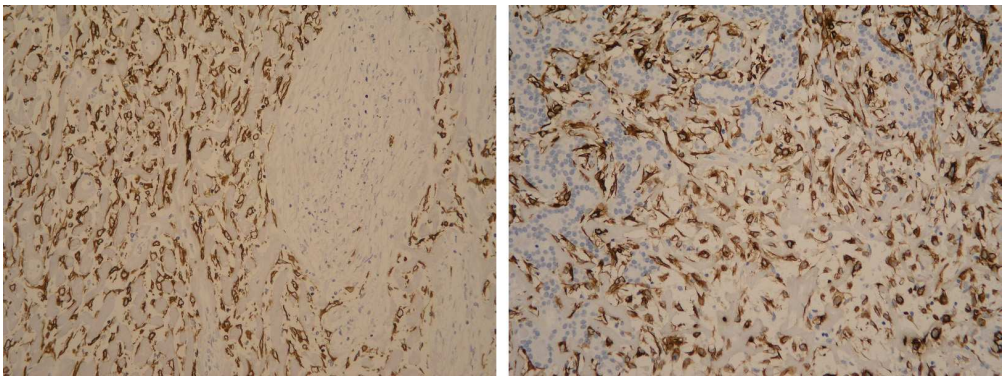
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