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Editorial

Spindle cell carcinoma and chondrosarcomatous differentiation in metaplastic breast carcinoma

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Metaplastic breast carcinoma is a heterologous group of aggressive breast tumors. It represents 0.2 to 1% of malignant breast tumors. Metaplastic carcinoma has varied morphology of epithelial components such as squamous cell and spindle carcinomas and mesenchymal foci of specific lineages like chondroid, osseous, lipomatous or muscular etc.[1] In view of such rare tumors, grossing, extensive sampling, microscopy and immunohistochemistry are important as treatment modalities are different.[1]

We encountered a 50 years female with huge mass in her right breast.Fna was performed and s/o phylloides tumor. All the clinical investigations were within normal limits.Right MRM was performed and specimen sent for histopathology.

Received right MRM specimen measuring18x16x10 cms with elliptical piece of skin measuring 14x10 cms and showed two bosselated nodular nodules measuring 8x6 cms with two suture marks at superior margin/long and medial margin /short. Nipple and areola was unremarkable. On Cutting open showed a large nodular, variegated tan white to glistening white tumor mass measuring 11x9x8cms below the overlying skin (**Figure 1**). Tumor is occupying whole of upper outer and upper inner quadrant and seen reaching up to the superior margin. Light microscopy showed tumor beneath the skin comprising components of spindle cell carcinoma and chondrosarcoma foci (**Figure 2**). Majority is spindle cell carcinoma composed of neoplastic cell arranged in bundles, fascicles and diffuse solid sheets. Individual cells are elongated with hyperchromatic nuclei with occasional prominent nucleoli with scant cytoplasm (**Figure 3**). Few mitotic figures are also noted. Infiltrating duct carcinoma, NOS foci was not evident.Foci of cartilaginous differentiation with loose chondroid and mucoid matrix with atypical chondrocytes was noted with high degree of anaplasia (**Figure 4**). Final HPE diagnosis was given as Metaplastic carcinoma –High grade, Heterologus Chondrosarcomatous components with Spindle cell carcinomawith invololment of axillary lymph nodes.

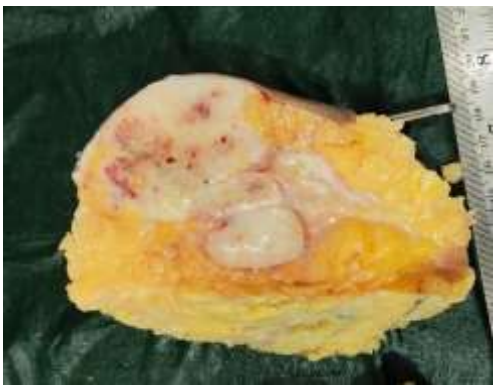

Figure 1: Gross appearance of MRM specimen showed tan white nodular infiltrative mass beneath the skin with glistening white appearance on cut section.

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Figure 2: Light microscopy showed tumor comprising components of spindle cell carcinoma and chondrosarcoma foci. (H&E,x100).

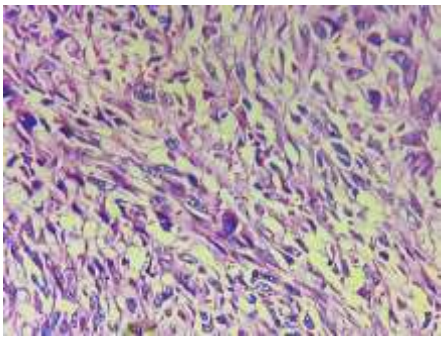

Figure 3: Spindle cell carcinoma composed of neoplastic cell arranged in bundles, fascicles and diffuse solid sheets with elongated tumor cells with hyperchromatic nuclei with occasional prominent nucleoli with scant cytoplasm (H&E,x400).

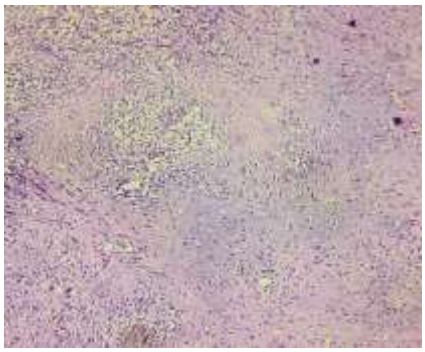

Figure 4: Foci of cartilaginous differentiation with loose chondroid and mucoid matrix with atypical chondrocytes was noted with high degree of anaplasia (H&E,x400).

Histopathological diagnosis was atmost important due to its rarity and varied differential diagnosis.The main differential of metaplastic breast carcinoma are malignant phyllodes,pleomorphic sarcoma and maligant adenomyoepitelioma.Most of the metapstic carcinoma are triple negative on immuohistochemistry or postive for CK,EMA,S-100 and actin.[2,3] It has bad prognosis and 5 year survival is less than 50 in most of the cases after histopathological diagnosis. [2,3]

More case series are required of such rare and aggresive tumor so that optimal treatment protocols will be decided.We highlight the role of histomorphology in this editorial of metapstic breast carcinoma in view of its varied morhology,very aggresive course and poor prognosis and literature scarcity.Combined modalites of treatment was advised in such scenario after mastectomies like adjuvent chemo or radiotherapy.

Thank you All. Enjoy this 1st academic issue of 2025.

Regards,
Dr. Dhiraj Nikumbh

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