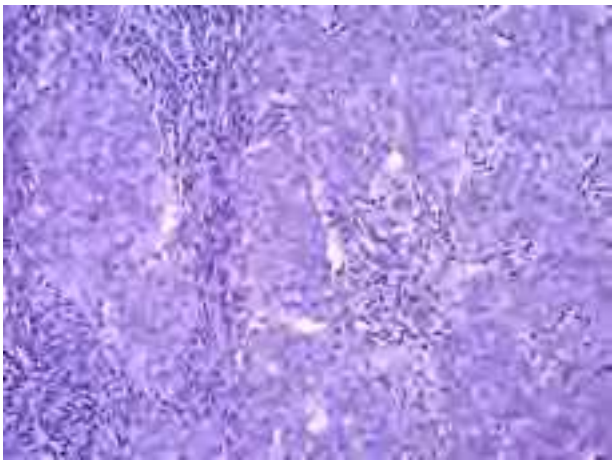

Fig. 5. Case 8

Case 9

Apocrine carcinoma in situ with microinvasion – a case report

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Objective: Invasive apocrine carcinoma is a very rare type of breast malignancy, with an incidence of 0.5-4%, which presumably develops from apocrine precancerous lesions. We report a case of microinvasive apocrine carcinoma which was diagnosed by fine needle aspiration cytology (FNAC) and confirmed by histopathology.

Material and Methods: A 45-year-old woman following a routine mammography that showed irregular spiculated mass measuring approximately 2.5cm in the upper outer quadrant of the left breast was referred to our Department for FNAC. The patient subsequently underwent left-sided quadrantectomy and axillary lymph node dissection, followed by postoperative adjuvant chemotherapy and radiotherapy. After 3 years of follow-up, no local recurrence or metastases were found.

Results: FNAC yielded moderately cellular smears composed of loosely cohesive clusters of large, polygonal cells with abundant, basophilic and granular cytoplasm suggestive of malignant neoplasm with apocrine features. On gross examination of the quadrantectomy specimen, a grayish-white, solid growth with pushing borders measuring 2.5x1.7x1.5 cm was identified. Twenty-one lymph nodes measuring from 0.3 to 1.3 cm were dissected. Histologically atypical apocrine adenosis, low- and high-grade apocrine ductal carcinoma in situ (ADCIS) and 9 foci of microinvasive apocrine carcinoma (0.1-0.5mm) were found. Apocrine metaplasia was identified in the surrounding ducts. No nodal involvement was observed and the surgical margins were tumor free. Immunohistochemistry revealed that malignant cells (ADCIS and microinvasive carcinoma) were strongly positive for gross cystic disease fluid protein-15, Her2, and

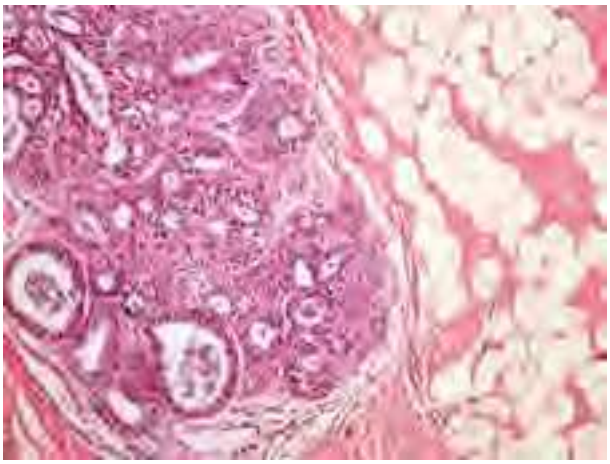

Fig. 1. Case 9

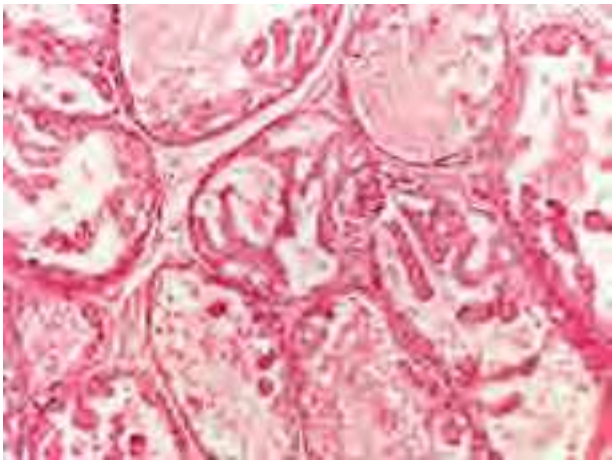

Fig. 2. Case 9

androgen receptor, and negative for estrogen and progesterone receptors. Ki67 proliferative index was approximately 15-20%, while 20-25% of the tumor cells were immunoreactive for p53.

Conclusions: Here we report a case in which all of the stages involved in apocrine carcinoma progression were identified, from benign metaplasia to hyperplasia, atypia, ADCIS, to microinvasive cancer.

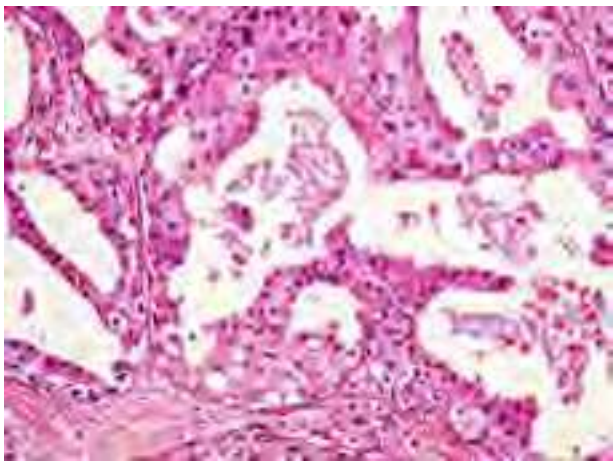

Fig. 3. Case 9

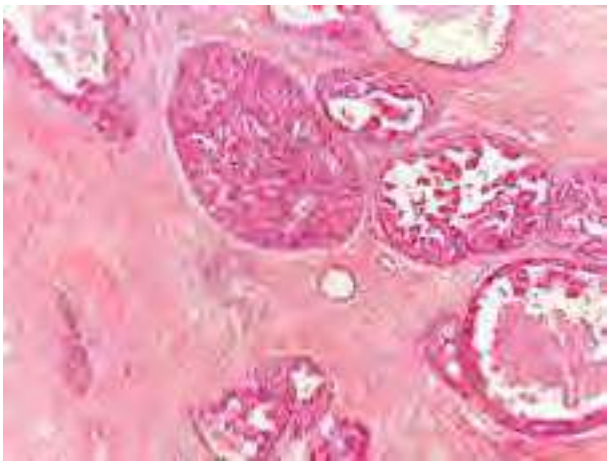

Fig. 4. Case 9

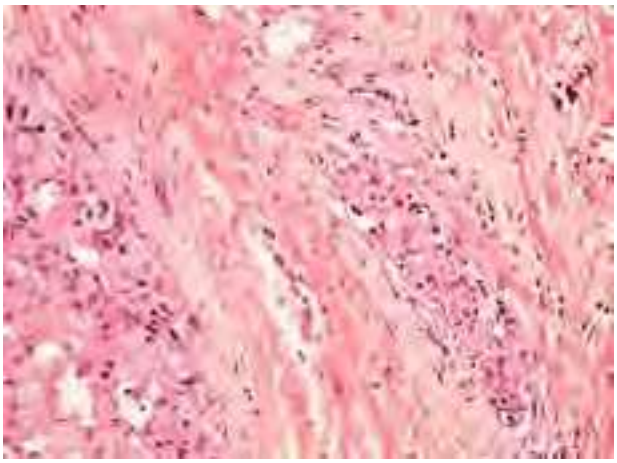

Fig. 5. Case 9

Case 10

Chemotherapy induced epithelial-mesenchymal transition in a high grade breast carcinoma: a case presentation

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Objective: Epithelial-mesenchymal transition (EMT) is a process in which cells lose epithelial features such as cell polarity and adhesion capability. Recent studies have shown that there may be a close link between EMT and chemoresistance and chemotherapy may induce EMT.

Material and Methods: A case of high-grade breast carcinoma with metaplastic features not responding to neoadjuvant chemotherapy (NCT) and showing a different phenotype after NCT is presented.

Results: Incisional biopsy of a 39-year-old female patient presented with ulcerating breast mass showed an ER/PR-positive HER2-negative high-grade invasive breast carcinoma with a high proliferation index. A 7.2 cm ulcerating, white-to tan tumor was seen in her post-NCT mastectomy specimen. There were large areas of necrosis in the center and tumor was composed of epithelial and spindle cells. Spindle cell component was not noted in the initial biopsy. Epithelial component was composed of bizarre, pleomorphic epithelial cells appearing much more aggressive than in the initial biopsy. Stromal hyalinization secondary to chemotherapy was present in limited areas. Atypical mitoses were plenty. No in situ component was found. Reticulin stain exhibited the difference between epithelial and mesenchymal components. However, all tumor cells were positive for pancytokeratin, cytokeratin 7 and vimentin and tumor was triple negative. E-cadherin was positive in the initial biopsy, and it was only focally positive in the epithelial component in mastectomy specimen. Other immunohistochemical markers showed variable staining. Twenty-six metastatic axillary lymph nodes with prominent surrounding soft tissue infiltration were detected.

Conclusions: The case will be discussed regarding chemotherapy-induced EMT in breast carcinoma and possible pathogenetic mechanisms.