Invasive Micropapillary Carcinoma of the Breast:
Cytomorphology of a Metastatic Deposit

Dear Dr. Bedrossian:

The cytomorphological appearance of a metastatic deposit of an invasive micropapillary carcinoma (IMPC) of the breast in a female patient is documented emphasizing a hither to undocumented feature. The cytomorphological appearance of the primary tumor of this patient has previously been reported in this journal.[1]

IMPC of the breast is uncommon and is considered as an invasive duct carcinoma variant. It is a tumor characterized by prominent lymph tropism, an aggressive clinical course[2] and a characteristic histological appearance.[3]

A 37-year-old female patient presented with a palpable lump on the medial aspect of the right upper arm. She gave a history of undergoing a right-sided mastectomy with level 3 axillary dissection in 1999, for an IMPC involving two quadrants of the breast with axillary lymph node deposits. Following surgery, she has been treated with chemotherapy and radiotherapy and was on tamoxifen at the time of presentation. The lump on the medial aspect of the right upper arm was aspirated and wet fixed in 95% alcohol. Hematoxylin and eosin stained smears were examined. The smears were cellular with a dual pattern of cohesive cell aggregates and discohesive cell clusters. The cohesive cell aggregates were composed of papillae, three-dimensional cell clusters, and cell clusters with angulated borders with acini within them (Figs. 1–3). Cell clusters had scalloped borders. The discohesive cell clusters were in loose sheets. Individually scattered single cells were seen in the background. These single cells had a prominent columnar configuration with eccentrically located nuclei (Fig. 4), malignant nuclear features, and a moderate amount of

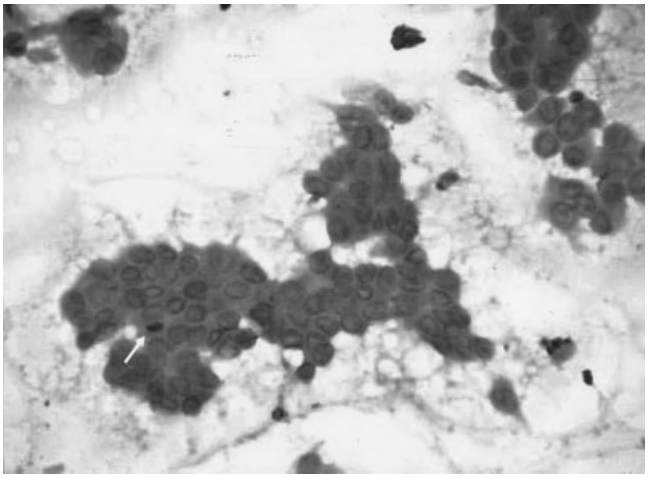

Fig. 1. A papillary cell cluster with malignant nuclei and a mitotic figure (H&E, ×40).

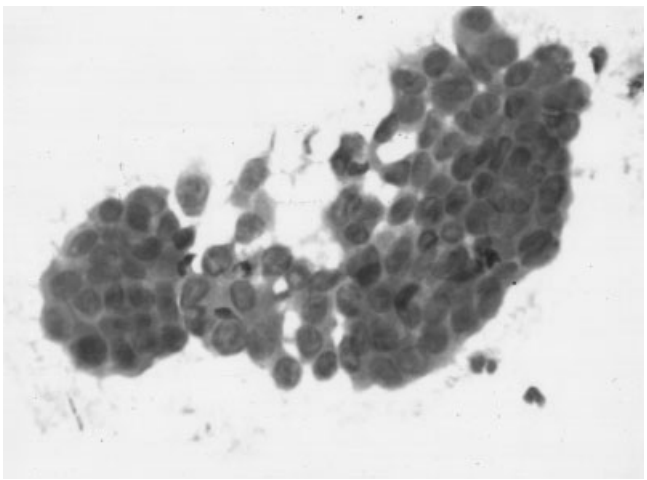

Fig. 2. Papillary and three-dimensional cell clusters (H&E, ×40).

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Received 12 April 2005; Accepted 18 January 2006
DOI 10.1002/dc.20520
Published online in Wiley InterScience (www.interscience.wiley.com).

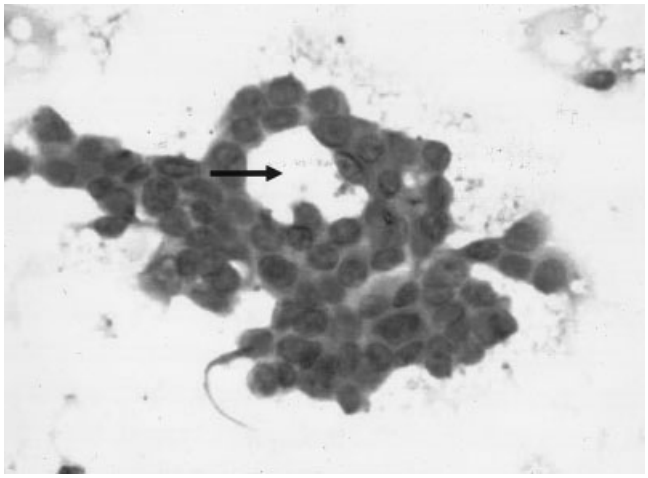

Fig. 3. Cohesive cell clusters with a focal acinar arrangement. The cells have enlarged nuclei with irregular borders and nucleoli (H&E, ×10).

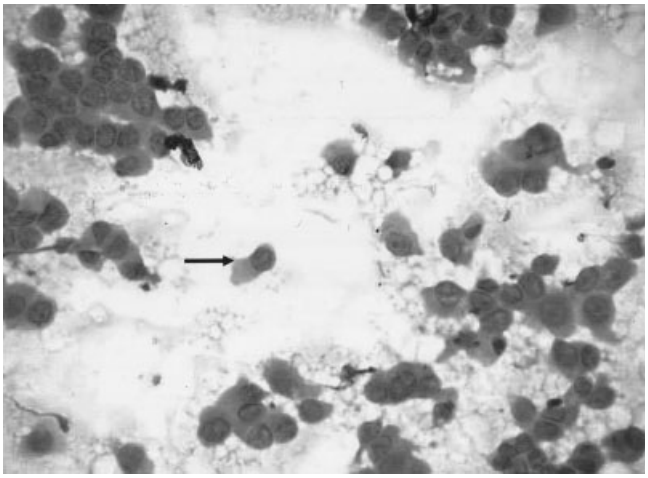

Fig. 4. Scattered single cells with a columnar configuration and eccentric nuclei (H&E, ×40).

cytoplasm. Although the cytoplasm was eosinophilic, it was not granular and the cells did not resemble apocrine cells. The background was clean. Psammoma bodies, macrophages, mucinous, and necrotic material were absent. The smears were categorized as malignant. On the basis of the history, a metastatic deposit from the previous breast primary was suggested. Histological confirmation was obtained subsequently.

In conclusion, most features we observed in this metastatic deposit were in keeping with what has been described earlier for the primary tumor in this patient[1] and in others with IMPC.[4] However, the prominent columnar configuration, which we observed in singly scattered tumor cells that were obtained from the metastatic deposit, is specifically mentioned as being absent in the aspirates from the primary tumor.[1] To the best of our knowledge this columnar configuration of single cells has not been previously reported in other primary and metastatic IMPC of the breast. The psamomma bodies that were described in the aspirates from the primary tumor in this patient were also absent in smears from the metastatic deposit.

Although IMPC is reported to run an aggressive clinical course, this patient who had a widely invasive IMPC with axillary lymph node deposits is alive with residual disease 5 years after the initial diagnosis and treatment.

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