TITLE:

BILATERAL INTRAMAMMARY LYMPH NODE METASTASIS FROM A SMALL CELL LUNG NEUROENDOCRINE CARCINOMA.

AUTHORS: LONGO, Justina; GERSZTEIN, Andrea.

Cytology Section - Pathology Division. "Carlos G. Durand" General Acute Hospital. Autonomous City of Buenos Aires, Argentina.

CLINICAL PRESENTATION:

A 68-year-old female patient with a history of endometrioid adenocarcinoma, who consulted for a right breast nodule detected during self-examination.
On physical examination, nodules were palpated in both breasts.
Ultrasound revealed a nodule in the right breast measuring 18x16mm and a nodule in the left breast measuring 10x9mm.
Given the oncological history, a CT scan of the head and neck, chest, abdomen, and pelvis was performed, revealing a spiculated nodule measuring 21x17mm in the left apical lung lobe.
Ultrasound-guided fine needle aspiration (FNA) was performed on both breast nodules.
Six cytological smears were obtained from each site, fixed in 96° alcohol, and stained using the Papanicolaou technique.
Slides were selected for automated immunocytochemical staining.

CYTOLOGICAL FINDINGS:

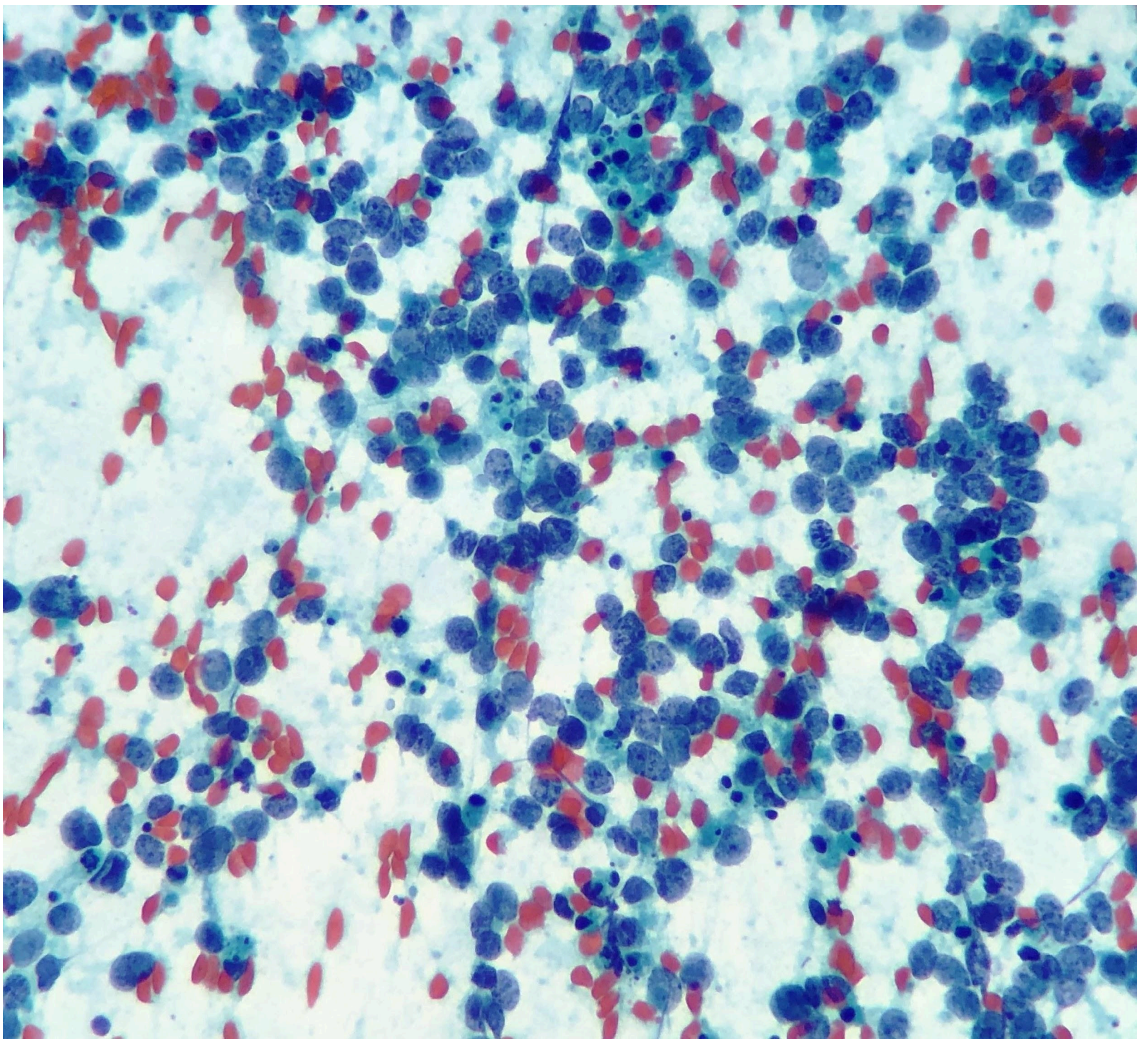
Both evaluated sites showed discohesive cells with granular chromatin, scant cytoplasm, molding, macrophages with tingible bodies, and chromatin stretching.
Abundant tumor necrosis and apoptotic cells were present.
Given the cytomorphological features of neuroendocrine neoplasia and the pulmonary CT findings, a differential diagnosis was made between bilateral primary breast carcinoma vs. intramammary metastasis from a primary pulmonary carcinoma.
Immunostaining for neuroendocrine tumors was performed using Chromogranin A and Synaptophysin; TTF1 and GATA-3 were used to determine the origin of the lesion, yielding the following results:
Chromogranin A, Synaptophysin, and TTF1: positive. GATA-3: negative.

DIAGNOSIS:

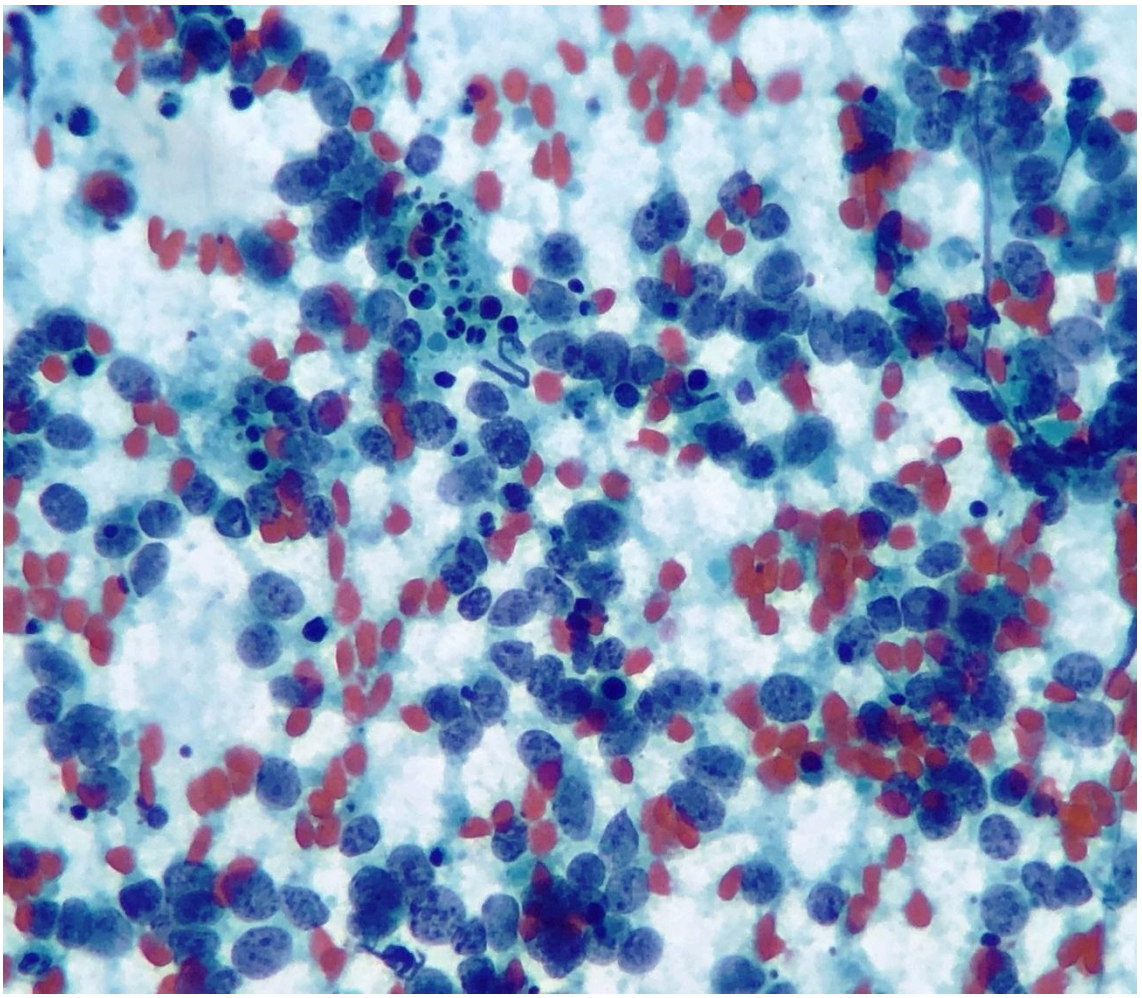
Given the cytomorphology, immunocytochemistry, and imaging findings, the diagnosis of bilateral intramammary lymph node metastasis from a small cell pulmonary neuroendocrine carcinoma is made.
Malignant category according to the Yokohama System for Fine Needle Aspiration Cytology Report of Breast Pathology.

MICROPHOTOGRAPHS:

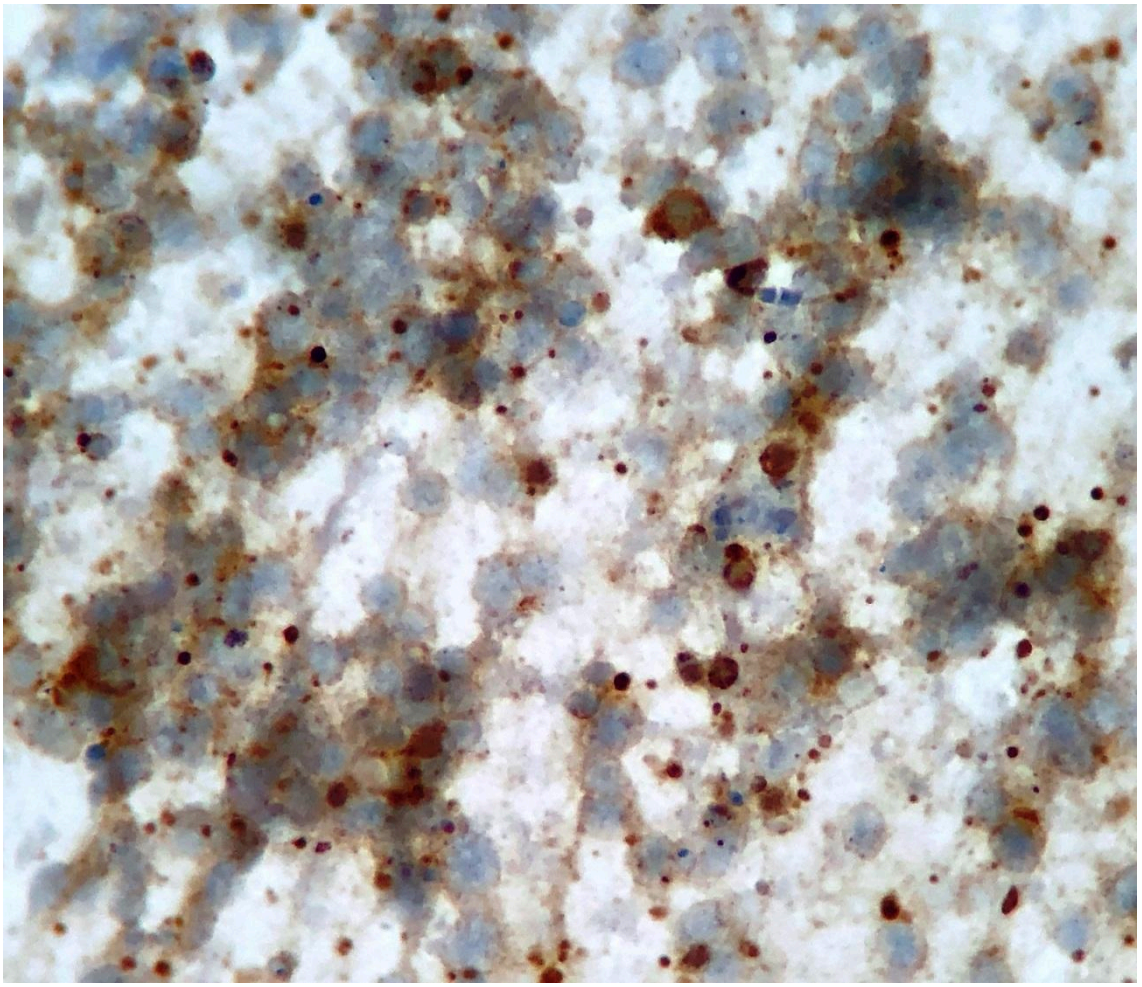
PAP (200x): Dual cell population consisting of viable cells and apoptotic cells. Macrophages with tingible bodies and chromatin stretching.



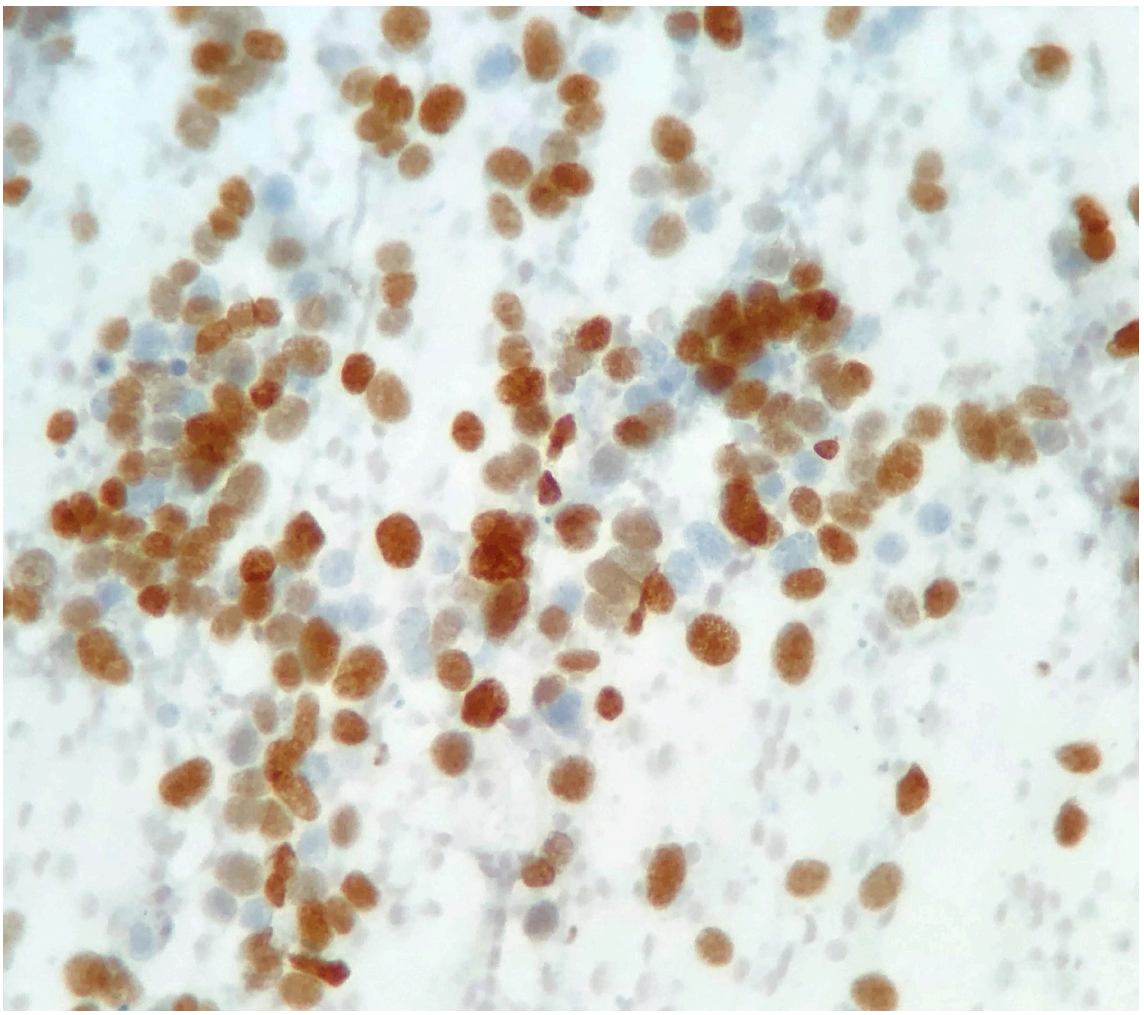
PAP (400X): Population of cells with round nuclei, fine and coarse chromatin clumps, scant cytoplasm, nuclear molding, chromatin stretching, macrophages with tingible bodies, and apoptotic cells. Tumor necrosis is associated.



Synaptophysin (400x): Intense diffuse cytoplasmic positive staining.



TTF1 (400x): Intense diffuse nuclear positive staining.



CONCLUSION:

Intramammary lymph nodes (IMLNs) are a potential site of spread for breast cancer and, to a lesser extent, for neoplasms of various origins.
Numerous authors have reported varying percentages of IMLN identification, ranging from 0.2% to 48%. This variability is due to the use of different techniques such as autopsy, histopathological examination, and imaging diagnosis.
Clinical identification is the least useful method for detecting them, with only 10% of intramammary lymph nodes being identified by imaging diagnostic techniques.
In the presence of uncommon cytomorphological findings for primary breast lesions, differential diagnoses should be considered, supported by clinical history, imaging characteristics of the nodules (intramammary node vs primary breast nodule), and immunocytochemistry.
In advanced stages of an underlying disease, reaching these diagnoses helps avoid unnecessary procedures or overtreatment.

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