



Cytodiagnosis of zosteriform cutaneous metastases from breast cancer with Tzanck smear: Report of a case with histopathological correlation

Zosteriform kutanöz meme kanseri metastazında sitolojik tanı: Histopatolojik korelasyon ile olgu sunumu

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Anahtar Kelimeler: Tzank yayma, zona, meme kanseri

To The Editor,

Tzanck smear is a cytological examination currently used in the diagnosis of vesiculobullous diseases and, slit-skin smear (SSS) is used to diagnose plaque and nodular lesions such as cutaneous leishmaniasis, mastocytosis and tumors^{1,2}. Fine-needle aspiration cytology (FNAC) is also used for many oncological indications including simple hyperplasia, benign neoplasms and cancers³.

A 42-year-old woman was admitted with the complaints of red nodules, which she noticed on her breast about 10 days ago, and back pain. Approximately 8 months ago, a metastasized lymphadenopathy, triple-negative breast carcinoma was diagnosed and chemotherapy was given before subcutaneous mastectomy and silicone implant surgery. One month later, she was referred by the oncology

clinic for zosteriform painful lesions on the breast found during radiotherapy. A dermatologic examination showed peau d'orange appearance of the left breast with zosteriform pink-red nodules about 3-4 mm in diameter (Figure 1). Patient consent form for photos were taken. Multinucleated giant cells were not observed whereas tumor cells with narrow cytoplasm and large hypochromatic nuclei were observed on SSS specimens obtained from a nodular skin lesion (Figure 2a). Histopathologic examination revealed solid infiltration of cystic, cribriform and adenoid structures extending from the papillary dermis to the depths of the reticular dermis (Figure 2b). Based on the clinical and immunohistochemical findings [e.g., estrogen receptor, progesterone receptor, GATA positivity], skin metastasis of breast carcinoma was diagnosed.

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Figure 1. Individual and grouped pink-red nodules over the breast

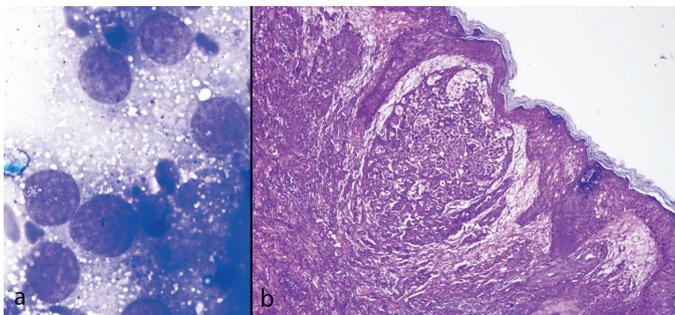


Figure 2. a) Tumor cells with narrow cytoplasm and large hypochromatic nucleus with slit-skin smear (Giemsa, x400), b) cribriform and solid aggregates of neoplastic cells involving the whole of the dermis (haematoxylin and eosin, x100)

George Papanicolaou first described exfoliative cytology for the detection of uterine / cervical cancer in 1943⁴. Shortly after, in 1947, Arnoult Tzanck/SSS defined Tzanck/SSS smear as a simple technique for diagnosing vesicular-bullous diseases⁵. In current dermatology practice, cytological examination is used for fungal pathogens and sarcoptes as well as vesiculobullous diseases, cutaneous leishmaniasis, deep fungal pathogens, molluscum contagiosum, pustular eruptions of newborn and cutaneous malignancies such as basal cell carcinoma and Paget's disease^{1,2}.

Breast carcinoma can cause zosteriform skin metastasis, in which, SSS can be helpful in distinguishing between metastases and herpes zoster. The appearance of multinucleated giant cells supports the diagnosis of herpes infection, but discohesive tumor cells can rarely interfere with large, ballooned cells. Antunes et al.⁶ reported a case of zosteriform cutaneous lymphocytic and leukemic infiltration. They did not see multinuclear giant cells compatible with herpes zoster in Tzanck/SSS examination, and the diagnosis of cutaneous infiltration by B-cell

chronic lymphocytic leukemia was established based on the results of histopathologic and cytogenetic analyses. Our case was diagnosed with herpes zoster in the oncology clinic due to the dermatomal distribution of the lesions and accompanying pain. Upon further dermatologic examination, due to the appearance of peau d'orange and nodular lesions, the case was thought to have cutaneous metastasis from breast carcinoma. This diagnosis was confirmed through the observation of large tumor cells with hypochromatic nuclei and narrow cytoplasm on SSS specimens. A histopathological examination also supported the diagnosis.

Although herpes zoster was not diagnosed in our case, it is common in patients with malignancy and treatment should be initiated within the first three days of onset of the eruption. Since Tzanck/SSS smear provides quick results, it is a practical examination that is very important in distinguishing between malignancies and herpes zoster. Having Tzanck/SSS smear results helps initiate treatment planning before the histopathology report is available. Tzanck/SSS smear could be preferred to FNAC because of its simplicity and practicality in diagnosing nodular skin lesions. Dermatologists should increase the use of Tzanck/SSS smear in their daily practice.

Ethics

Informed Consent: Patient consent form for photos were taken.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: S.A., F.G., Concept: S.A., Design: S.A., Data Collection or Processing: S.A., F.G., Ş.Y., Analysis or Interpretation: S.A., Ş.Y., P.G., Literature Search: S.A., Ş.Y., B.B.Ö., Writing: S.A., Ş.Y., F.G.

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