SKIN MANIFESTATIONS OF INTERNAL DISEASE

METASTATIC SIGNET-RING CELL CARCINOMA OF THE SKIN: CASE REPORT

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Background: Cutaneous metastases are rare and often appear as late manifestations of advanced internal malignancies with a reserved prognosis. The major primary sites are the breast, lung, and gastrointestinal tract. In these cases, the immunohistochemical examination assists in the diagnostic elucidation of the primary neoplastic histological subtype.

Observation: A 55-year-old female patient with cutaneous lesions spread throughout the body 7 months ago, associated with increased abdominal volume, anemia and weight loss. She had previous examinations suggestive of invasive adenocarcinoma with signet ring cells in the stomach and intestine. Abdominal CT scans showed ascites, osteolytic lesions and absence of hepatic involvement.
Examination revealed erythematous-infiltrated plaques located in the arms, chest and back. The histopathological examination demonstrated in the dermis fibroblastic proliferation and signet ring cells.
The immunohistochemical panel showed negativity for CK20 and CDX2, markers suggestive of gastrointestinal tract and intense positive for CK7, GATA-3, mammoglobin, estrogen and progesterone receptors. The mammography examination was inconclusive. However, with the conclusive data of immunohistochemistry, the final diagnosis was cutaneous metastasis of occult neoplasia of the breast.

Key message: In relation to metastases with signet ring cells, immunohistochemistry provides decisive data for the discovery of the primary tumor site.
CK7 and CK20 cytokeratins are useful biomarkers for distinguishing carcinomas of unknown origin. The CK7 + / CK20- phenotype is expressed in most breast, lung and ovary tumors, while adenocarcinomas of the gastrointestinal tract express CK20 + in addition to CDX2, seen in 97% of colorectal cancers and 61% of stomach cancers .
Regarding ductal and lobular, primary or metastatic tumors, 90% also express the GATS-3 multispecific transcription factor. Estrogen receptors (ER) and progesterone receptors (PR) increase the sensitivity of the diagnosis.