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Eruptive seborrheic keratosis: A perilous clue

An abrupt increase in seborrheic keratoses in patients with an underlying malignancy is called the Leser-Trélat sign

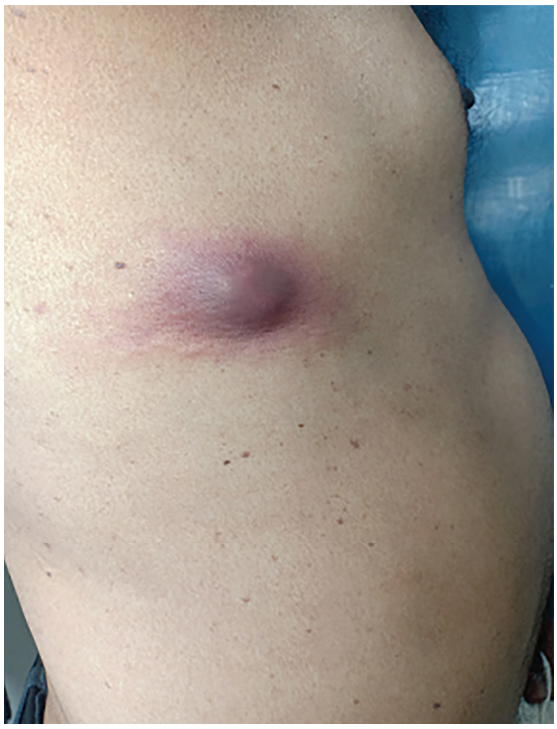

Figure 1. An erythematous, firm, nontender nodule measuring 3 cm × 3 cm in the right midaxillary line.

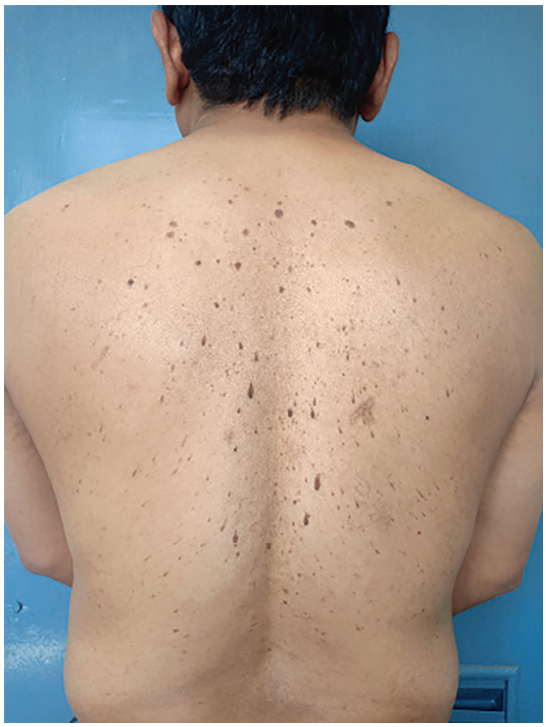

Figure 2. Multiple seborrheic keratoses of various sizes arranged in a "Christmas tree" pattern on the patient's back.

A 51-year-old man presented with a 1-month history of multiple eruptive seborrheic keratoses on his back and a single painless nodule on his chest. He reported occasional dry cough and loss of appetite over the past 3 months, but he did not seek medical care for them. He had no history of fever, weight loss, night sweats, or gastrointestinal complaints.

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The physical examination revealed an erythematous nodule measuring 3 cm by 3 cm in the right midaxillary line (**Figure 1**). The nodule was firm, mobile, and nontender on palpation, and it had a normal temperature. Also noted were multiple seborrheic keratoses of various sizes arranged in a "Christmas tree" pattern on his back (**Figure 2**). The rest of the examination was unremarkable.

A punch biopsy was taken from the nodule. The histopathology report described an

unremarkable epidermis with clusters of pleomorphic tumor cells in the dermis (**Figure 3a**) arranged in small glands inciting a desmoplastic reaction (**Figure 3b**). The tumor cells had coarse chromatin and a moderate amount of cytoplasm. Immunostaining results were positive for cytokeratin 7 (**Figure 3c**). Overall, the features suggested a possible adenocarcinoma.

The patient underwent whole-body ^{18}F-fluorodeoxyglucose (FDG) positron emission tomography with contrast-enhanced computed tomography, which revealed a soft-tissue mass lesion with speckled calcification in the right middle lobe of the lung. The lesion was FDG-avid (ie, with high uptake of FDG), heterogeneously enhancing, and lobulated. The lesion reached up to the hilum, abutting the mediastinum and encasing the right middle lobe bronchus.

There were FDG-avid lymph nodes in the right axillary and supraclavicular regions, a single FDG-avid lesion in the left adrenal gland, and multiple subcutaneous and muscular deposits distributed in the chest wall, left thigh, right gluteal region, and upper back.

Based on those results, we made a diagnosis of metastatic non-small-cell lung cancer, adenocarcinoma type, not otherwise specified. Palliative chemotherapy with paclitaxel and carboplatin was started, and the patient received oncology follow-up care. Response to chemotherapy could not be ascertained, as the patient was lost to follow-up owing to COVID-19-related lockdown.

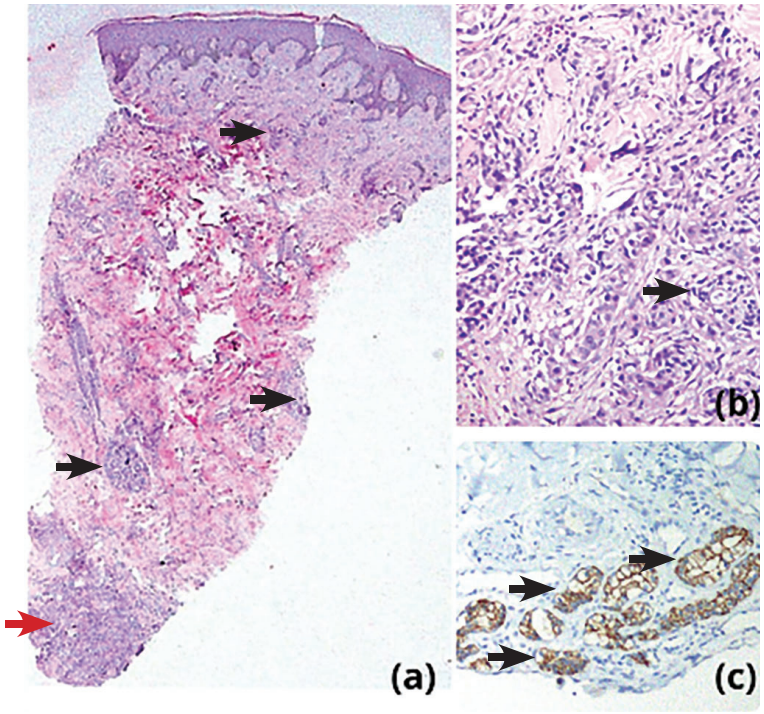

Figure 3. A: The epidermis appears relatively unremarkable. The dermis shows a mild to moderate degree of perivascular and periadnexal mononuclear inflammatory infiltrate (black arrows) along with a tumor deposit in the deep dermis (red arrow) (hematoxylin and eosin stain; magnification × 20). B: The tumor is composed of cells arranged in small glands (arrow) inciting a desmoplastic reaction. The tumor cells are moderately pleomorphic and have coarse chromatin and a moderate amount of cytoplasm (hematoxylin and eosin stain; magnification × 200). C: Immunostaining shows tumor cells positive for cytokeratin 7 (arrows) (CK 7 immunostain; magnification × 200).

ERUPTIVE SEBORRHEIC KERATOSIS

An abrupt increase in the size and number of seborrheic keratoses in patients with an underlying malignancy is called the Leser-Trélat sign. More than 50% of associated malignancies are adenocarcinomas, especially those of the stomach, colon, rectum, and breast,[1] although this sign has also been reported in other malignancies, including lung cancer.[2] The association of the Leser-Trélat sign with malignancy is debatable, with suggestions that the sign may exist independent of an underlying occult malignancy or may be associated with nonmalignant conditions such as benign neoplasms, pregnancy, or human immunodeficiency virus infection.[3,4]

The exact pathogenesis of the Leser-Trélat sign is unclear. One hypothesis attributes it to growth factors released by tumor cells, such as growth hormone, epidermal growth factor, and transforming growth factor alpha. Another suggests that extracellular matrix components, such as glycosaminoglycans released from stroma of the tumor, become incorporated in distant normal skin, causing epithelial alteration and eruption of seborrheic keratoses.[5]

The Leser-Trélat sign may be the initial presentation, or it can be detected concurrently with or after diagnosing an internal malignancy. Eruptive seborrheic keratoses can occur anywhere, but the most common sites are the back, chest, and extremities.[5]

Evaluation of a patient with the Leser-Trélat sign should begin with a detailed history and clinical examination. Special investigations should be performed to look for the occult primary malignancy.

Our patient was apparently doing well except for the relatively abrupt appearance of multiple eruptive seborrheic keratoses, which prompted us to investigate further for an occult malignancy. The nodule on his chest wall could not be explained by the Leser-Trélat sign and thus was biopsied. The results helped us reach the final diagnosis.

Despite the nonspecific nature of the Leser-Trélat sign, our case exemplifies the importance of performing a thorough evaluation in patients presenting with sudden-onset eruptive seborrheic keratoses.

DISCLOSURES

The authors report no relevant financial relationships which, in the context of their contributions, could be perceived as a potential conflict of interest.

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