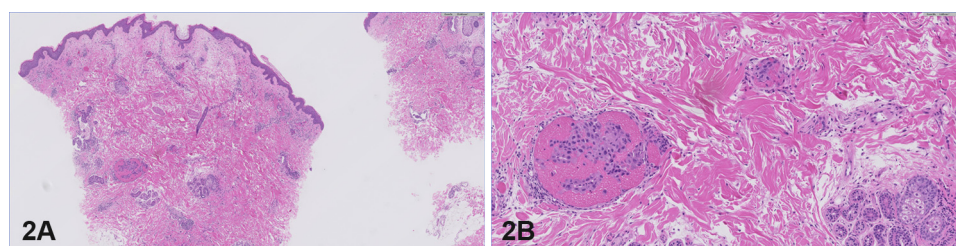


Purpuric patches and telangiectasias on the chest



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Key words: carcinoma telangiectodes; cutaneous metastasis; purpura; telangiectasias.



A 72-year-old man with history of tobacco use and chronic obstructive pulmonary disease was admitted to the hospital for respiratory failure. Imaging found a large, spiculated left upper lobe lung mass, with multiple large pulmonary nodules within the same lobe and enlarged intraparotid, cervical, and supraclavicular lymph nodes. During his admission, the patient was noted to have scattered, irregular, nonpalpable purpuric patches and telangiectasias on the left side of the chest (Fig 1). He had a normal platelet count of 211 K/ μ L (146-337 K/ μ L) on evaluation. A punch biopsy of a lesion found ectatic blood vessels in the superficial and mid dermis containing aggregates of epithelioid pleomorphic cells staining positive for AE1/3, TTF-1, and MOC-31 (Fig 2).

Question 1: What is the most likely diagnosis?

- A. Actinic purpura
- B. Carcinoma telangiectodes
- C. Poikiloderma vasculare atrophicans (PVA)
- D. Poikiloderma of Civatte

E. Telangiectasia macularis eruptiva perstans (TMEP)

Answers:

A. Actinic purpura – Incorrect. Benign causes of telangiectasia should be included in the differential diagnosis, as telangiectasias may be seen in elderly

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individuals in sun-exposed areas owing to ultraviolet damage. However, imaging showed a concerning mass, and histologic analysis confirmed a neoplastic process.

B. Carcinoma telangiectodes — Correct. Carcinoma telangiectodes is a form of cutaneous metastasis that results from local intravascular or intralymphatic invasion, seen almost exclusively in breast cancer. It may present as an erythematous patch with telangiectasias, pruritic papules and nodules, or pseudovesicular lesions.

C. PVA — Incorrect. Although PVA may present with erythema and telangiectasias in elderly men, the lesions are typically accompanied by atrophy, scaling, and hypo- or hyperpigmentation, which can coalesce in a reticular pattern.

D. Poikiloderma of Civatte — Incorrect. Poikiloderma of Civatte is characterized by telangiectasias, erythema, and skin atrophy; these changes are typically caused by sun exposure and are located around the cheeks and lateral neck.

E. TMEP — Incorrect. Although TMEP may present with red-brown erythematous macules and telangiectasias on the chest or extremities, it is most often seen in young adults, and histology would show mononuclear infiltrate and mast cells.

Question 2: What are the characteristic histopathologic findings in this condition?

A. Epidermal atrophy, telangiectasias, pigmented incontinence, and hyperkeratosis

B. Superficial lymphohistiocytic infiltrate, basal cell hyperpigmentation, and mast cells around capillaries

C. Atrophy, pigment incontinence, telangiectasias, with atypical T-cell lymphocytic infiltrate with epidermotropism and variable loss of T-cell antigens

D. Tumoral emboli within dilated dermal vessels

E. Thinned epidermis and a dermis with extravasated red blood cells and reduced collagen fibers replaced by abnormal elastic fibers

Answers:

A. Epidermal atrophy, telangiectasias, pigmented incontinence, and hyperkeratosis — Incorrect. This finding is seen in poikiloderma of Civatte.

B. Superficial lymphohistiocytic infiltrate, basal cell hyperpigmentation, and mast cells around

capillaries — Incorrect. This finding is characteristic of telangiectasia macularis eruptiva perstans.

C. Atrophy, pigment incontinence, telangiectasias, with atypical T-cell lymphocytic infiltrate with epidermotropism and variable loss of T-cell antigens — Incorrect. This biopsy finding is more typical of poikiloderma vasculare atrophicans.¹

D. Tumoral emboli within dilated dermal vessels — Correct. This finding is characteristic of carcinoma telangiectodes, and immunohistochemistry may further delineate the primary tumor.² In this case, the cells stained positive for AE1/3, TTF-1, and MOC-31, which helped identify the poorly differentiated epithelial cells as likely pulmonary adenocarcinoma.

E. Thinned epidermis and a dermis with extravasated red blood cells and reduced collagen fibers replaced by abnormal elastic fibers — Incorrect. This finding is characteristic of actinic purpura, which rarely has inflammatory infiltrates.

Question 3: What is the most likely underlying primary malignancy in this form of cutaneous metastasis?

A. Breast cancer

B. Oral cavity cancers

C. Lung cancer

D. Colon cancer

E. Ovarian cancer

Answers:

A. Breast cancer — Correct. Breast cancer is the most common cause of carcinoma telangiectodes and is the most common cause of cutaneous metastases in women.³ In general, non-nodular cutaneous metastases are more frequently seen in breast cancer, such as carcinoma telangiectodes, carcinoma erysipeloides, or carcinoma en cuirasse.^{2,4,5}

B. Oral cavity cancers — Incorrect. Cancers of the oral cavity are the third most common cause of cutaneous metastases in both men and women.³

C. Lung cancer — Incorrect. Although lung cancer is statistically the most common cause of cutaneous metastases in men, carcinoma telangiectodes is very rare with lung cancer. Skin metastases caused by lung cancer may be painless or tender, mobile or fixed and are typically described as solitary or multiple, firm nodules, varying from flesh-colored

to red or purple in appearance.^{4,5} Some patients may present with cutaneous findings before or at the time of diagnosis of their primary lung tumor.⁵ Although nodules are most common, metastases may have a vascular, zosteriform, infectious, or inflammatory appearance.⁴ These non-nodular subtypes of cutaneous metastases are most often described in breast cancer, including carcinoma erysipeloides, carcinoma en cuirasse, and carcinoma telangiectodes.^{2,4,5}

D. Colon cancer — Incorrect. Colon cancer is the second most common cause of cutaneous metastases in men.³

E. Ovarian cancer — Incorrect. Ovarian cancer is the second most common cause of cutaneous metastases in women.³

Abbreviations used:

PVA: poikiloderma vasculare atrophicans

TMEP: telangiectasia macularis eruptiva perstans

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