An atypical case of ectopic extramammary Paget disease presenting on the lateral neck

Priyank Sharma, MD,[a] Abigail Waldman, MD,[a] Jia Xu, MD,[b] and Frank R. Vleugels, MD[a]
Boston, Massachusetts

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INTRODUCTION

Extramammary Paget disease (EMPD) is a rare intraepithelial adenocarcinoma typically affecting elderly white female patients in sites with high apocrine gland density and is often associated with visceral or adnexal carcinomas.[1] EMPD typically affects anogenital skin and less commonly, axillary skin and is rarely reported in cutaneous regions without apocrine glands, where it is classified as ectopic.[2] Ectopic EMPD has only been reported on the head 10 times and has never been reported on the neck.[2]

EMPD typically presents as well-demarcated, scaly, pruritic, erythematous plaques.[1,2] EMPD mimics many cutaneous disorders including contact dermatitis, irritant dermatitis, seborrheic dermatitis, inverse psoriasis, and pagetoid basal cell carcinoma,[1] resulting in an average diagnostic delay of 2 years.[3] We present an atypical case of ectopic EPMD arising in a white male patient with a nonpruritic lesion on the lateral neck. To our knowledge, this is the first reported case of ectopic EMPD on the neck.

CASE REPORT

A 59-year-old white man with a history of numerous basal cell carcinomas presented with a nonhealing, nonpruritic plaque on his left lateral neck that had been present for an unknown duration. He reported pain and irritation when his clothing contacted the lesion but denied pruritus and bleeding. He denied fever, chills, nausea, weight loss, night sweats, and other systemic symptoms. He had no personal or family history of visceral cancers and reported a recent negative colonoscopy.

Abbreviation used:

EMPD: extramammary Paget disease

Physical examination found a 4.0- × 2.9-cm thin scaly pink plaque on his left superior cervical neck (Fig 1). He had no head and neck lymphadenopathy and no other similar lesions on examination.

Punch biopsy and histopathology of the lesion found an intraepidermal proliferation of large neoplastic cells with pale, vacuolated cytoplasm in a Pagetoid spread pattern (Fig 2). Immunohistochemical stains were strongly positive for cytokeratin CAM5.2 and CK7; weak for polyclonal CEA; and negative for p63, 34be12, and MART-1, consistent with EMPD (Fig 3). Further immunostains were $CK20^{-}$ and $GCDFP^{-}$, indicating low risk of the lesion being secondary to a visceral malignancy.

The patient underwent Mohs micrographic surgery requiring 2 stages to clear his EPMD lesion. We recommended that the patient have a full physical examination with his primary care physician and age-appropriate cancer screening. There is no evidence of recurrence of his EPMD 9 months postprocedure, and he continues follow up by the dermatology department.

DISCUSSION

EMPD is a rare adenocarcinoma typically presenting as a well-demarcated scaly, erythematous plaque in apocrine gland dense sites such as the axilla, genitals, and perianal area and rarely presents ectopically in regions without apocrine glands.[1] Pruritus is the most common symptom and occurs

From the Departments of Dermatology[a] and Pathology,[b] Brigham and Women's Hospital, Harvard Medical School.
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Correspondence to: Priyank Sharma, MD, 221 Longwood Avenue, Boston, MA 02115. E-mail: psharma16@bwh.harvard.edu.
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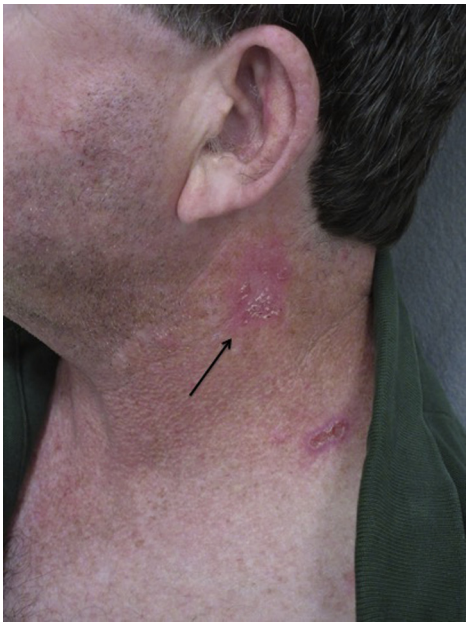

Fig 1. Thin scaly pink plaque on the left lateral superior neck, later found to be ectopic EMPD.

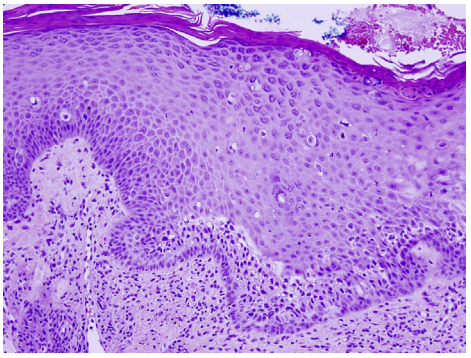

Fig 2. Punch biopsy of the superior lateral cervical neck shows intraepidermal proliferation of single and small clusters of large cells with pale, vacuolated cytoplasm in a Pagetoid pattern. (Hematoxylin-eosin stain; original magnification: ×200.)

in 50% to 70% of patients, but otherwise EMPD has a nonspecific presentation and frequently goes undiagnosed for years.[1,2] Approximately 25% of EMPD cases are associated with an underlying cutaneous adnexal carcinoma, commonly apocrine type, and a further 10% to 15% of cases are secondary to an associated adenocarcinoma of the lower gastrointestinal tract, prostate, bladder, urethra, and cervix.[4]

To prevent diagnostic delays, EMPD should be considered in the differential diagnosis for persistent, scaly, pruritic patches and plaques including those arising in cutaneous sites without apocrine glands such as the head and neck. EMPD may arise in near proximity to and mimic other skin lesions, warranting a low threshold to biopsy to distinguish this entity.

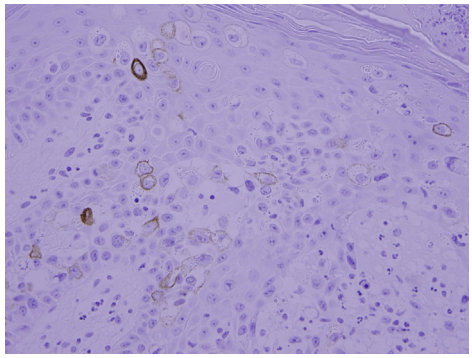

Fig 3. The tumor cells are positive for cytokeratins CAM5.2 and CK7 and are negative for p63, consistent with EMPD. (Cam 5.2 immunostains; original magnification: ×400.)

The histologic appearance of EMPD is defined by Paget cells, which are large cells with prominent nucleoli, abundant eosinophilic cytoplasm, and occasionally cytoplasmic clearing. The cells are predominantly basally located in confluent nests and single cells along the epidermis with upward, Pagetoid scatter throughout the epidermis. Primary EMPD is typically positive for CK7, polyclonal CEA, and GCDFP immunostains. $CK20^{+}$ (a marker commonly present in visceral epithelia), and $GCDFP^{-}$ (a marker of apocrine differentiation) variants suggest EMPD is secondary to a visceral malignancy, warranting systemic workup.[5] Patients who do not have a high-risk variant should undergo age-appropriate cancer screenings and be followed up with closely.

EMPD treatment options included photodynamic therapy, topical 5-fluorouracil, topical bleomycin, radiotherapy, systemic chemotherapy with radiation, laser surgery, and excisional surgery.[2] Surgical treatments can be challenging owing to disease extension beyond clinically apparent margins, resulting in treatment failure rates of up to 60% with wide-margin surgical excision.[1] Mohs micrographic surgery is found to have lower failure rates of 8% to 27% and has emerged as a leading treatment choice.[1]

Ectopic EMPD is a rare skin cancer that may be secondary to visceral malignancies. To our knowledge, this was the first reported case on the neck and was treated with Mohs micrographic surgery to provide the lowest recurrence rate.

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