Unusual lesion on the vulva of a postmenopausal woman

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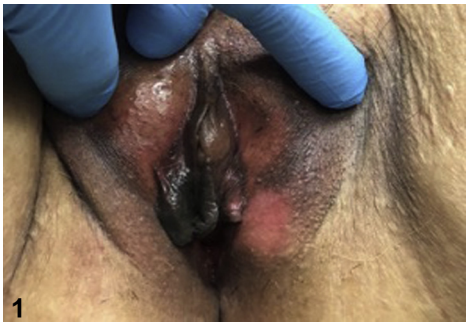

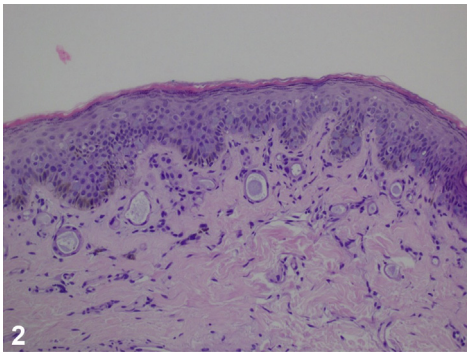

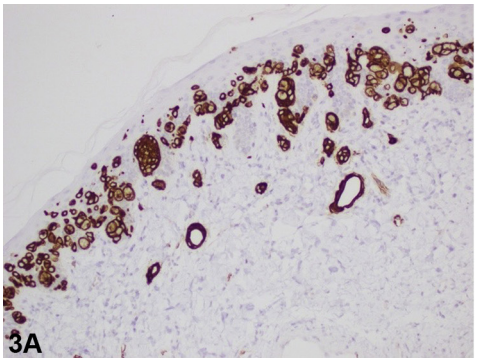

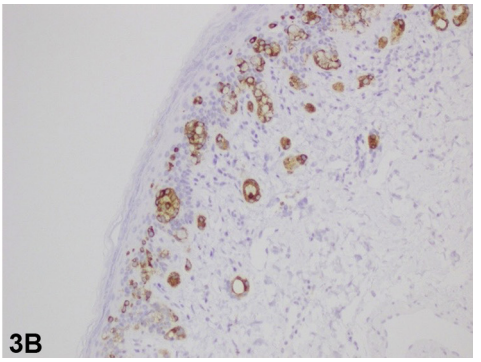

An 82-year-old Chinese woman presented to our multidisciplinary vulva clinic with a mildly itchy patch on her external genitalia of unknown duration. Notably, she was also undergoing vaginal laser rejuvenation at a private clinic. Cutaneous examination revealed a 2 × 2 cm well-demarcated, smooth, slightly hypopigmented-to-pinkish patch in the lower one-third of the left labium majus without any surface change or underlying induration (Fig 1). The rest of the cutaneous examination was normal. There was no regional lymphadenopathy. Per-speculum and per-vaginal examination were normal. A 4-mm skin punch biopsy was taken from the lesion (Figs 2 and 3, *A* and *B*).

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Question 1: What is the most likely diagnosis?

A. Focal vitiligo

B. Postinflammatory hypopigmentation

C. Extra-mammary Paget disease (EMPD)

D. Dermatomycosis

E. Early lichen sclerosus

Answers:

A. Focal vitiligo — Incorrect. Although vitiligo can present as an isolated itchy, hypopigmented patch at its initial inflammatory phase, the histopathologic features exclude the diagnosis of vitiligo.

B. Postinflammatory hypopigmentation — Incorrect. Postinflammatory hypopigmentation is an important differential diagnosis in this case, as the patient was undergoing vaginal laser rejuvenation at the time of presentation. However, given the age of the patient, the symptomatic nature of the lesion, and the unclear history of the preceding inflammatory dermatoses, a skin punch biopsy was considered.

C. EMPD — Correct. The skin biopsy finding in Fig 2 is consistent with EMPD, showing characteristic large round atypical intraepithelial cells with abundant pale cytoplasm (Paget cells) arranged singly or in clusters with dermal invasion. Pigmentary skin changes, such as hyperpigmentation or hypopigmentation, may be seen in association with a classic slowly expanding eczematous plaque of EMPD. However, EMPD masquerading as a subtle hypopigmented patch is highly uncommon. Interestingly, our patient was found to have invasive ductal carcinoma of the breast during staging workup. The patient underwent wide local excision of the EMPD lesion with a transposition flap closure. However, as the excision margins were infiltrated by tumor cells, the patient subsequently received radiation therapy. This case highlights that an isolated hypopigmented patch on the genital skin in an elderly patient can be an early sign of EMPD, and the consideration of an early diagnostic biopsy can avoid a poor outcome. Depigmented EMPD has been previously reported in few case reports and one case series from Japan and Taiwan.[1-3]

D. Dermatomycosis — Incorrect. Dermatomycosis usually present as an annular scaly plaque. The histopathologic features observed in this case do not support the diagnosis of dermatomycosis.

E. Early lichen sclerosus — Incorrect. An early stage of lichen sclerosus may present as a single ivory white sclerotic plaque; however, typical sites are the inter-labial sulcus and labium minus.

Question 2: Which immunohistochemical marker is useful to distinguish between the primary and secondary forms of EMPD?

A. CK7

B. CK14

C. CK20

D. S100

E. p63

Answers:

A. CK7 — Incorrect. In general, CK7 staining is often positive in the primary form of EMPD; however, it may be positive in EMPD secondary to underlying urothelial carcinoma.

B. CK14 — Incorrect. CK14 staining is negative in both primary and secondary EMPD.

C. CK20 — Correct. CK20 staining is positive in the majority of patients with the secondary form of EMPD with underlying gastrointestinal or genitourinary adenocarcinoma and, conspicuously, negative in the primary form. Therefore, CK20 can help identify the subset of patients with a guarded prognosis.

D. S100 — Incorrect. S100 is negative in EMPD and helps to differentiate it from melanoma *in situ* ($S100^{+}$).

E. p63 — Incorrect. p63 is a marker of squamous cell differentiation and is useful to distinguish EMPD ($p63^{-}$) from pagetoid Bowen disease ($p63^{+}$).

Question 3: Which topical therapy has been reported to be effective in the treatment of EMPD?

A. Topical corticosteroids

B. Diclofenac gel

C. Bexarotene

D. Imiquimod 5%

E. None of the above

Answers:

A. Topical corticosteroids — Incorrect. Topical corticosteroids are often used in an initially misdiagnosed lesion of EMPD and have not proven effective in its treatment.

B. Diclofenac gel − Incorrect. Diclofenac 3% gel in hyaluronic acid is licensed in some countries to be used for lesion-or field-based treatment of actinic keratosis with minimal side effects.

C. Bexarotene − Incorrect. Bexarotene 1% gel is the only Food and Drug Administration-approved topical retinoid in the management of early-stage mycosis fungoides.

D. Imiquimod 5% − Correct. While complete surgical excision is the treatment of choice for EMPD, retrospective case series and a recently published systematic review has shown imiquimod 5% cream to be a potential therapeutic option for patients unable to undergo surgery.[4] The systematic review included 8 cohort studies using imiquimod 5% cream in various dose schedules (daily to twice-weekly application) for a duration of 2 to 56 weeks. Complete response was achieved in 54% of the patients; however, disease recurrence was experienced in 39% of the complete response group after a mean follow-up period of 29 months.[5]

E. None of the above − Incorrect.

Abbreviations used:

EMPD: extramammary Paget disease
CK: cytokeratin

Conflicts of interest

None disclosed.

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