

Reddish Smooth Nodule on the Labia Majora: A Quiz

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An 87-year-old woman was referred to our department with vulvar lesion of 1-month duration. She had developed a small nodule on her vulva with mild pruritus, and had routinely scratched the area. The nodule had rapidly increased in size. Her medical history included cerebral infarction, hypertension, and osteoporosis. Physical examination revealed a 15-mm, firm, exophytic, dome-shaped, red nodule with a small ulcer on the upper left edge of her labia majora (Fig. 1a). Dermoscopy revealed pink-white structureless areas and linear-irregular vessels (Fig. 1b), and there was hair growth on the surface of the lesion. An excisional biopsy with 2-mm margins was performed.

What is your diagnosis? See next page for answer.

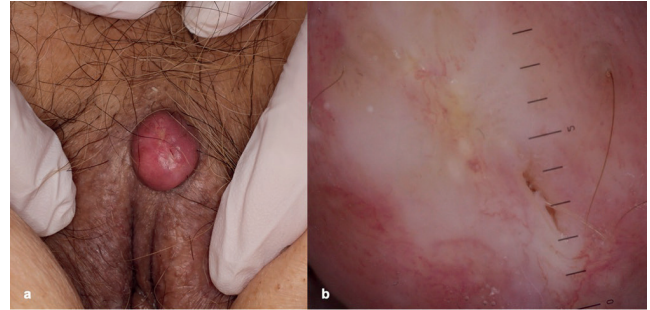


Fig. 1. Clinical findings. (a) A 15-mm, clearly marginated, firm, exophytic, dome-shaped, red nodule with a small ulcer on the upper left edge of the labia majora. (b) Dermoscopy showed pink-white structureless areas and linear-irregular vessels. There was hair growth on the surface of the lesion (scale: 1 mm).

ANSWERS TO QUIZ

Reddish Smooth Nodule on the Labia Majora: A Commentary

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Diagnosis: Vulvar keratoacanthoma

Histopathological examination revealed symmetrical, cup-shaped exophytic and endophytic proliferation of squamous epithelium with a central keratin-filled crater (Fig. 2a). The proliferating squamous cells were eosinophilic, glassy in appearance, and only rare mitotic figures or cytological atypia were observed (Fig. 2b). Thereafter, no local recurrence was observed during the 2-year follow-up.

Vulvar keratoacanthoma is very rare and, to the best of our knowledge, there have only been 6 cases reported previously in the English literature (1–5). Including the current case, the clinical characteristics of all 7 cases are shown in Table I. The median age of the 7 cases is 54 years, ranging from 33 to 87 years. The patient in the current report, at 87 years of age, is the oldest subject reported to date. The onset sites were on the labia majora ($n=5$) and clitoris ($n=2$), and the clinical appearance of most cases was expressed as a raised nodule of approximately 1 cm. In one case the lesion was characterized by a central crater and in 2 cases by a central ulcer; however, the other 4 cases had no craters or ulcers. None of the reported cases had hyperkeratosis, and the duration of the lesions ranged from 4 weeks to a few months, during which each lesion proliferated rapidly. There was no mention of a tendency to spontaneous regression, because excisional biopsy was performed in all cases. There were no cases of recurrence. Two cases were diagnosed as well-differentiated squamous cell carcinoma after partial biopsy (1, 3).

In the present case, the patient noticed a vulvar nodule with pruritus, which enlarged rapidly during scratching; however, the triggering factor remains unclear. Keratoacanthoma is clinically characterized by a well-circumscribed nodule with a central keratotic plug. In contrast, the current case presented with a pink-coloured nodule with a smooth surface. Keratoacanthoma involving the vulva assumes an atypical clinical appearance, differing from those arising on other sites, such as a lower keratotic tendency. In

the case of a rapidly growing nodule on the vulva, keratoacanthoma should be included in the differential diagnosis of malignant tumours, such as squamous cell carcinoma.

Dermoscopy of keratoacanthoma shares some features with squamous cell carcinoma and cannot be used to clearly differentiate these entities (6). Keratin and white circles with dot vessels are useful to differentiate keratoacanthoma and squamous cell carcinoma from other rapidly-growing crateriform nodules (7).

Keratoacanthoma is a common tumour that is thought to derive from hair follicles. The majority of cases involve the face, and vulvar involvement is rare. We here report the first case of vulvar keratoacanthoma from Japan.

REFERENCES

1. Rhatigan RM, Nuss RC. Keratoacanthoma of the vulva. *Gynecol Oncol* 1985; 21: 118–123.
2. Gilbey S, Moore DH, Look KY, Sutton GP. Vulvar keratoacanthoma. *Obstet Gynecol* 1997; 89: 845–850.
3. Chen W, Koenig C. Vulvar keratoacanthoma: a report of two cases. *Int J Gynecol Pathol* 2004; 23: 284–286.
4. Nascimento MC, Cominos D, Davies NJT, Obermair A. Vulvar keratoacanthoma: a case report, *Gynecol Oncol* 2005; 97: 674–676.
5. Ozkan F, Bilgiç R, Cesur S. Vulvar keratoacanthoma. *APMIS* 2006; 114: 562–565.
6. Rosendahl C. Dermoscopy of squamous cell carcinoma and keratoacanthoma. *Arch Dermatol* 2012; 148: 1386–1392.
7. Kwiek B. Keratoacanthoma (KA): an update and review. *J Am Acad Dermatol* 2016; 74: 1220–1233.

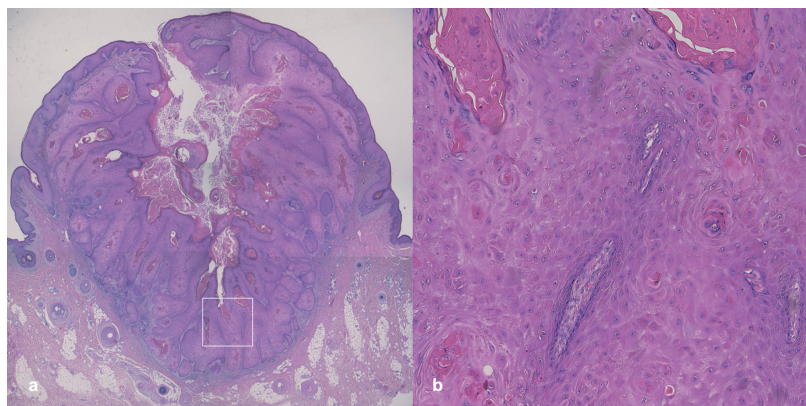


Fig. 2. Histopathology. (a) Histological features of the excision specimen showed symmetrical, cup-shaped exophytic and endophytic proliferation of squamous epithelium with a central keratin-filled crater (haematoxylin-eosin (H&E), original magnification $\times 12.5$). (b) Histological features of the nodule on the skin showed small aggregates of atypical cells in granulation tissue (H&E, original magnification $\times 100$).

Table I. Vulvar keratoacanthoma reported in the English literature

Case	Age, years	Laterality	Size (cm)	Duration	Clinical findings	Surgery	Ref.
1	65	Right labia majora	1.5	4 weeks	Lump with central "ulceration"	Excisional biopsy	1
2	54	Mid-right labia majora	1	4 weeks	Raised, plaque-like lesion	Wide local excision	2
3	49	Left labia majora	0.8	4 weeks	Exophytic, dome shaped, pale-pink nodule with a central keratin-filled crater	Excisional biopsy	3
4	44	Left labia majora	1	6 weeks	Lesion	Excisional biopsy	3
5	79	Clitoris	0.9	A few months	Firm, raised lesion	Excisional biopsy	4
6	33	Clitoris	1	A few months	Exophytic non-ulcerated dome-shaped pale pink nodule	Excisional biopsy	5
7	87	Left labia majora	1.5	4–5 weeks	A firm, exophytic, dome-shaped, red nodule with a small ulcer	Excisional biopsy	Present case