Adult-onset median raphe cyst of the penis

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DESCRIPTION

An otherwise healthy 23-year-old man presented to our male genital dermatology unit with an 8-week history of sudden postcoital appearance of a preputial growth (figure 1A). This asymptomatic lesion had a fibroelastic consistency. Dermoscopic examination showed a translucent, structureless skin-coloured lesion, with no visible punctum (figure 1B). The patient recalled a barely discernible papule in this region since childhood.

Doppler ultrasound ruled out a vascular lesion and no contiguity with the urethra (figure 2A). Incisional biopsy confirmed a congenital median raphe cyst (MRC) (figure 2B). Due to the patient's aesthetic concerns, the whole cyst and capsule were later excised without complications. There has been no recurrence after 24 months of follow-up.

Theories regarding the origin of MRC include abnormal closure of the urethra during embryogenesis or the presence of ectopic periurethral glands of Littre proliferating into epithelial cavities.¹

MRC is usually diagnosed during infancy. However, a subset of cases may be small and quiescent, only becoming evident during adulthood due to trauma (including coitus) and/or infection, after entering a secretory phase.²

Although MRCs are usually located along the midline (anywhere between the meatus and

Figure 2 (A) Doppler ultrasound shows a thin-walled, anechoic, septated cavity (red arrows), unconnected to the urethra, surrounded by normal-looking tissue (yellow arrows). (B) Histopathology with H&E stain (original magnification 4×) reveals an empty cystic cavity, with a mixed lining composed of stratified squamous non-keratinising epithelium (blue arrow) and urothelium (green arrow).

Figure 1 (A) Clinical image shows a paramedial elongated growth. (B) Dermoscopic image reveals a translucent skin-coloured lesion.

perineum), they can sometimes be paramedial, making clinical diagnosis more challenging.³

We describe for the first time the dermoscopic image of MRC in adulthood. Dermoscopy can be helpful in the evaluation of inflammatory, infectious and tumorous genital dermatoses, enhancing clinical diagnosis.⁴⁻⁷ In our case, the absence of a punctum is a relevant finding, since important differentials are possessed of a punctum, such as epidermal cysts and penile pilonidal sinus/cysts.^{8,9} Translucency is highly suggestive of a cystic entity, however, definitive diagnosis can only be achieved histologically. We emphasise the importance of Doppler ultrasonography prior to biopsy because a diagnosis of Mondor's disease or sclerosing lymphangitis can be made on a clinical-radiological basis in most cases.¹⁰ An ultrasound also excludes contiguity with the urethra, such as with an urethral diverticulum; this could be clinically and dermoscopically indistinguishable from an MRC; a biopsy or excisional surgery could threaten the urethra and create a fistula. Doppler ultrasound imaging and histopathological images must always be interpreted in conjunction with clinical (including dermoscopic) findings. Hence, when in doubt, such cases should be evaluated by an expert urologist.¹¹

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Learning points

- Median raphe cyst must be considered in the differential of preputial growths in children and adults, even if paramedial.
- Dermoscopy can assist in clinical evaluation, narrowing the differential, showing a translucent image and the absence of a punctum.
- Doppler ultrasound should be done before considering a biopsy or planning an excision.

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