

QUIZ

Multiple nodules over scrotum in a young man

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A 25 year old male patient presented with multiple asymptomatic nodules over scrotum of 5 years duration. The lesions had been slowly increasing in number and size. There was no history of discharge or pain. Patient also gave history of regular shaving of the region with a razor.

Examination revealed multiple, skin colored papules and nodules of size 0.2-1 cm, at the root of scrotum (fig-1). The nodules were globular, had a smooth surface, nontender and fixed to skin. A clinical diagnosis of 'multiple pilar cysts' was made and biopsy was performed, (fig-2).

What is your diagnosis?



1- Clinical photograph showing papules and nodules over scrotum

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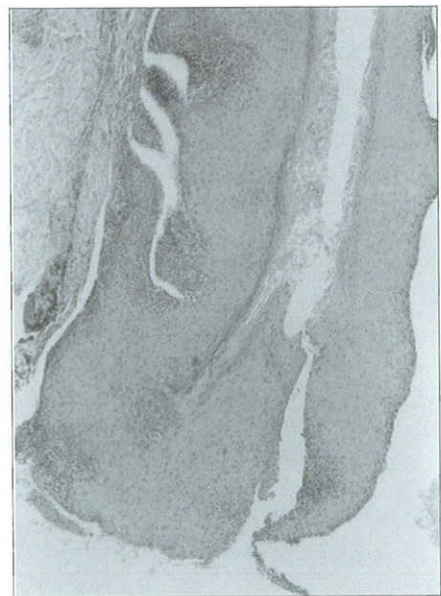
Answer

Biopsy showed an endophytic lesion, characterized by a central invagination filled with keratin, related to the hair follicle. The invagination was deep and extended into the mid dermis. In the wall of the invagination, proliferation of basaloid cells and squamous eddies could be seen. However, there was no dysplasia. The adjoining dermis showed infiltration with lymphomononuclear cells and dilated blood vessels. These features were consistent with Inverted follicular keratosis.

Discussion:

Inverted follicular keratosis (IFK) is a benign skin lesion that typically presents as an asymptomatic, solitary, verrucous nodule on the face of middle-aged and older individuals. It has been described at several other sites such as lip², thigh³, and vulva⁴

The origin of the tumour has been a matter of debate. Helwig⁵ who described it first in 1939, regarded it as a tumour arising from hair follicle—a view endorsed by Mehregan, who regards it as a tumour arising from the infundibulum of the hair follicle⁶. Lever classified it as an irritated seborrheic keratosis. Occasional koilocyte-like cells have been noted in the tumour. This has led to the opinion that the condition is caused by human papilloma virus and represents an involuted wart—hence the



2- Photomicrograph showing deep invagination at the site of hair follicle. Note the basaloid hyperplasia and squamous eddy in the wall of the invagination. H & E (2-X)

name verruca vulgaris with squamous eddies*.

However, studies with polymerase chain reaction for DNA of human papilloma virus have failed to demonstrate the aetiological role of HPV consistently and hence the matter continues to be debated. The importance of IFK lies in the fact that it may cause diagnostic confusion with malignant lesions, especially squamous cell carcinoma (SCC), both clinically and pathologically. The histological features include^{5,6}.

1. Endophytic or exoendophytic tumour. The predominant growth is inwards—a feature, which distinguishes it from other variants of seborrheic keratosis.
2. Relation to hair follicle
3. Proliferation of basaloid cells and focal hypergranulosis

4. Squamous eddies

5. Occasional presence of atypical cells and mitotic figures
6. Lymphomononuclear infiltration in dermis .
7. Dilated blood vessels and extravasation of RBCs in dermis.

Our case is notable for the unusual clinical morphology—multiple globular nodules with smooth surface, which caused diagnostic confusion with pilar cysts. While seborrheic keratosis is known to occur commonly over scrotum, IFK has not been previously described over scrotum. A previous report explained the occurrence on vulva to be due to repeated follicular trauma caused by shaving.

A similar causative mechanism could be responsible for the occurrence of the lesions at this unusual site in our case .

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