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Commentary

Vestibular papillomatosis: An important differential diagnosis of vulvar papillomas

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Abstract

Most authors believe that vestibular papillomatosis (VP) is an anatomical variant of the vestibular mucosa. But VP is sometimes misdiagnosed as genital warts and this can lead to aggressive investigations, therapy, and anxiety in patients. We present a patient with VP. Dermoscopy and reflectance confocal microscopy (RCM) were performed to differentiate VP from other papilomatous diseases of the vulva.

Introduction

The etiology of VP is still controversial. In the past, VP was thought to be a human papilloma virus (HPV) disease but nowadays it is considered an anatomical variant of the vulva and may be considered as the female equivalent of pearly penile papules in men. Owing to its papillomatous appearance, it is sometimes misdiagnosed as genital warts. Therefore, dermatologists should recognize this condition.

Case synopsis

A 42-year-old woman presented to her gynecologist with one-year history of asymptomatic papules on the vulva. A diagnosis of condyloma on the vulva was made and the patient was referred to our clinic for treatment. Many flesh-colored, soft, filiform papillomas, 1 to 2 mm in diameter, were observed. They were symmetrically located along both inner sides of the vulva with some being in groups (Figure 1A) . She had no history of any extramarital sexual contacts. Histopathological examination showed finger-like protrusions of epithelium and also acanthosis and prominent fibrovascular cores; within the stroma blood vessels were seen . There were mild chronic inflammatory cells but no koilocytes were seen and the specimen was negative for HPV DNA by in situ hybridization (Figure 1B).

Dermatoscopy with Fotofinder videodermoscope (Fotofinder systems, Germany) demonstrated regular, often symmetrical and linear papillae over the vulvar vestibule and irregular linear vascular channels were observed in the transparent core of papillae (Figure 1C).

RCM was performed with Vivascope 3000® , manufactured by Lucid-Tech Rochester, NY, USA. It revealed an increased number of canalicular blood vessels (seen as thickened, elongated and tortuous dark canalicular structures, (green arrows)) and inflamatory cells in the dermis (seen as round to polygonal refractile cells (red arrows)) (Figure 1D.)

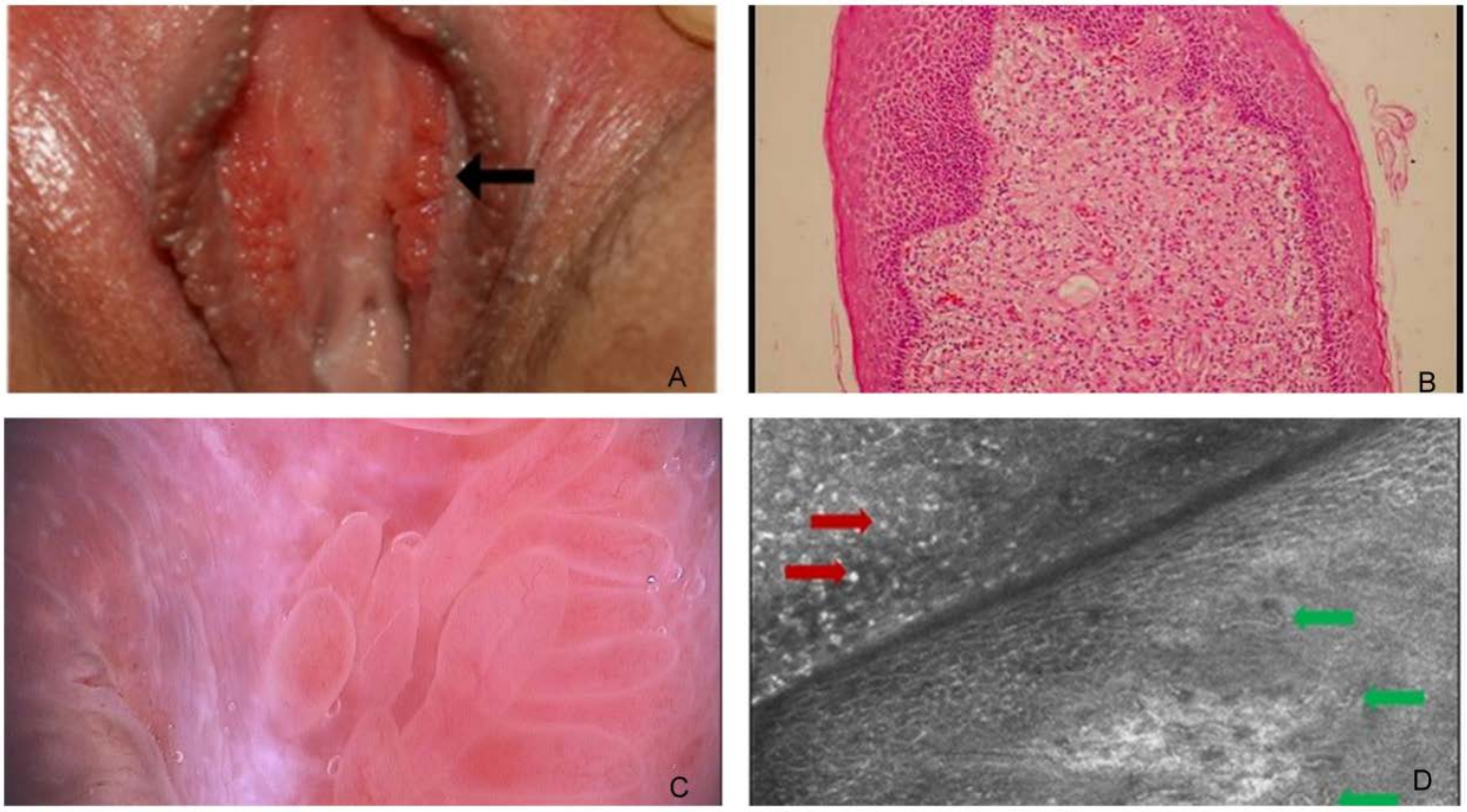

Figure 1A. Flesh-colored, soft, filiform papillomas. **Figure 1B.** Finger-like protrusions of epithelium, acanthosis, and prominent fibrovascular cores within the stroma (haematoxylin-eosin stain: x50). **Figure 1C.** Regular, often symmetrical and linear papillae over the vulvar vestibule and irregular linear vascular channels in the transparent core of the papillae. **Figure 1D.** Increased number of canalicular blood vessels (seen as thickened, elongated and tortuous dark canalicular structures, (green arrows)) and inflamatory cells in the dermis (seen as round to polygonal refractile cells (red arrows))

Discussion

In a prevalence study in London, UK, one per cent of women showed VP [1] . Since then they have been reported under a variety of names: hirsutoid papillomas of vulva, vulvar squamous papillomatosis , micropapillomatosis labialis, and squamous vestibular micropapilloma.

The clinical resemblance and localization of VP has caused controversy about its etiology. VP has been reported with HPV infection, but a consistent association has not been proven. Most recent studies have shown HPV infection is not a cause of vestibular papillomatosis [2-4]. Five clinical parameters were suggested by Moyal-Barranco et al in order to facilitate the differential diagnosis of VP from genital warts [2]. Vestibular papillae are symmetric or linear, soft, and pink-colored. The bases of individual vestibular papillae projections remain separate. On the other hand, condyloma acuminatum is hard and irregular. Individual projections can coalesce in a common base. In addition, in most cases, condyloma acuminatum exhibits whitening when subjected to the acetic acid test [2].

Dermatoscopy of vestibular papillomata has been defined by Su-Han Kim et al [5]. Dermoscopy reveals abundant and irregular vascular channels in the transparent core of cylindrical papillae. However, dermatoscopy of condyloma acuminatum shows multiple, irregular projections with tapering ends, which are whiter and broader than vestibular papillae; hemorrhages (small red to black dots or streaks) may also be present [5].

RCM is a non-invasive, painless, real-time imaging method based on an optic system consisting of a light source (diode *laser* of 830nm wave length) and a set of objective lenses. The detector can process the light received showing images similar to histologic slides that represent consecutive transversal slides of the skin. The images can reach a depth of up to 350um, allowing the visualization of the epidermis and superficial dermis. The following RCM features were evaluated: inflamatory cells in the dermis (seen as round to polygonal, refractile structures) and increased number of irregular vessels (seen as increased number of dark canalicular structures). However, the RCM features of condyloma accuminatum shows papillomatosis, honeycomb pattern of the spinous layer, and glomerular vessels [6]. We assum that the canalicular blood vessels on RCM correspond to irregular linear vascular channels on dermoscopic examination and inflamatory cells were probably stimulated through local persistant irritation of the papillomas.

Conclusion

A correct diagnosis of vestibular papillomatosis prevents unnecessary concern and laboratory tests. Therefore it is worthwhile to draw the attention of dermatologists to this entity. Dermoscopy and RCM can help to differentiate VP from condyloma accuminata and prevent aggressive investigations and unnecessary therapies.

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