QUIZ SECTION

Multiple Oral White Papules in a 3-year-old Girl: A Quiz

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We report the case of a 3-year-old girl with no significant personal or family medical history who presented to the dermatology department with oral lesions evolving over 4 months. The lesions had progressively extended, leading to moderate discomfort, particularly during eating. Clinical examination revealed whitish, verrucous papules located on the inner cheeks, mucosal side of the lips and labial commissures (Fig. 1a). A full skin examination revealed no associated abnormalities. Initial laboratory testing, including complete blood count, serum protein electrophoresis, HIV serology, serum electrolytes and quantitative immunoglobulin levels, revealed no significant abnormalities. Skin biopsy showed epithelial acanthosis associated with viral cytopathic effects, including koilocytotic atypia within the spinous layer, characterized by hyperchromatic nuclei with perinuclear clear halos and binucleation, suggesting papillomavirus infection (Fig. 1b).

What is your diagnosis?
1: Condyloma acuminatum
2: White sponge naevus
3: Focal epithelial hyperplasia
4: Cowden's syndrome
See next page for answer.

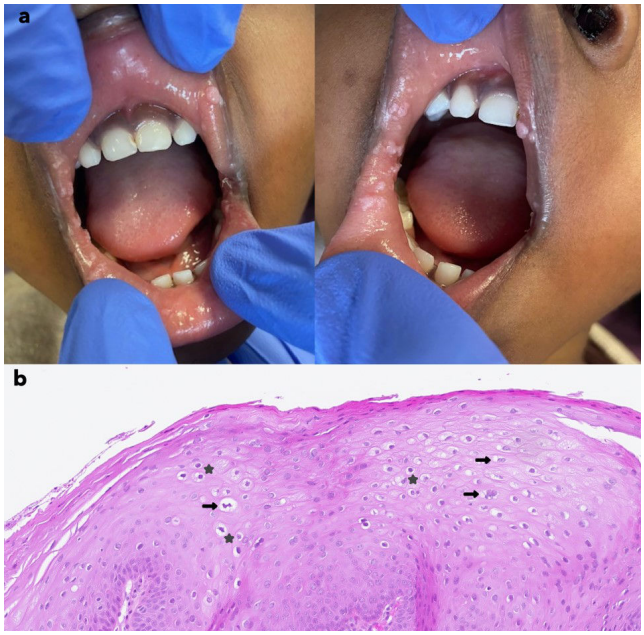

Fig. 1. (a) Multiple white papules on the oral mucosa of a 3-year-old girl. (b) Histology of skin biopsy showing a well-organized acanthotic squamous epithelium with focal parakeratosis. Presence of viral cytopathic effects within the spinous layer: koilocytic atypia with dark, smudged nuclei and perinuclear clear halos (stars), as well as binucleation (arrows) (haematoxylin-eosin stain, 400x).

ANSWERS TO QUIZ

Multiple Oral White Papules in a 3-year-old Girl: A Commentary

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Diagnosis: **Focal epithelial hyperplasia**

The clinical presentation of our young patient highly suggested focal epithelial hyperplasia (FEH). PCR analysis performed on the skin biopsy revealed the presence of human papillomavirus 32 (HPV-32). The diagnosis of FEH was confirmed on considering clinical and histology findings (cytopathogenic changes) and PCR analysis (detection of HPV-32). The absence of cutaneous or extracutaneous involvement, along with normal blood findings, further supported the benign and localized nature of this condition.

FEH, also known as Heck's disease, is a benign condition of the oral mucosa, mostly observed in young individuals. The mean age of affected patients is 23 years, with a male-to-female ratio of 3/4 (1). This pathology seems to preferentially affect certain ethnic groups, particularly Native Americans, Inuit and other indigenous populations (2).

The disease manifests as smooth-surfaced papules localized on the oral mucosa, affecting the lips, the inner cheeks, the tongue and occasionally the palate. The lesions are often asymptomatic and may spontaneously regress without sequelae. However, in some cases, they can persist and cause discomfort, functional or aesthetic, as observed in our case. In such situations, several therapeutic options can be considered, including surgical excision, laser treatment (CO_2, diode), topical therapies (imiquimod, interferon-β) or photodynamic therapy (3, 4, 5). However, these treatments can be invasive, painful and may lead to adverse effects and, therefore, be poorly tolerated, particularly in the paediatric population. As a result, a conservative approach with therapeutic abstention and regular clinical monitoring is often preferred. For our patient, the latter approach was retained, and lesions spontaneously regressed within 9 months.

The aetiology of this condition is linked to infection with specific subtypes of HPV, particularly low-risk types 13 and 32, which are the most frequently identified in Heck's disease (6). Nevertheless, other HPV subtypes have been identified, including high-risk types such as HPV-16, -18 and -31, as well as intermediate-risk types (7). A genetic predisposition has been suggested, notably via an association with the HLA-DR4 allele (8).

The diagnosis of FEH is based on clinical and histopathologic findings, although PCR can be useful for aetiological confirmation, particularly in identifying the specific HPV subtype involved.

This case contributes to a better characterization of this rare entity, especially in children, and highlights the importance of including it in the differential diagnosis of oral papillomatous lesions such as squamous cell papilloma, condyloma, Cowden's disease, white sponge nevus or even verrucous carcinoma.

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