CASE REPORT

Periurethral and vulval condylomata acuminata: an unusual juvenile venereal disease in a 3-year-old girl

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SUMMARY

We present a case of giant condyloma acuminatum (CA) in a 3-year-old girl with rapidly growing vulval and periurethral lesions, which was investigated thoroughly and successfully treated with excision biopsy. Genital warts in the form of giant alarming vestibular, vulval and periurethral lesions of CA are very rare in children. There is need for a multidisciplinary approach with potential sociomedicolegal implications. Surgical excision is safe, effective and provides an opportunity to assess the extent of the lesion and tissue for accurate diagnosis. Genital warts in the form of giant alarming vestibular, vulval and periurethral lesions of CA are very rare in children. Indications for surgical treatment include large, recurrent or refractory lesions, as well as the need for histological identification and acquiring tissue for immunotherapy when necessary. The strategy of an extended follow-up is recommended so as to ensure identification of any risk situations.

BACKGROUND

Human papilloma viruses (HPV), are aetiological agents of all types of warts, including those associated with sexual transmission. Genital warts in the form of condyloma acuminatum (CA) are rare in children and caused by HPV infection.^{1–8} Its presence in children raises concern of possible sexual abuse. A multidisciplinary team approach is essential to clarify the mode of the infection's transmission.^{1 4}

CASE PRESENTATION

A 3-year-old girl attended the paediatric accident and emergency department and rapid referral clinic for rapidly growing vestibular, vulval and periurethral lesions with foul smelling discharge, itching, dysuria and bleeding of 3 months' duration. She was on holiday in Hong Kong and was given an antibiotic course for the same problem without any change in symptoms. She did not have any gastrointestinal, genital or urinary symptoms. She was not on any broad spectrum antibiotics, steroids or any other immunomodulatory drugs and she was thriving well. Her biological father was away and her mother took the help of a middle-aged woman; the family was from a poor socioeconomic background. The mother did not cohabit with any men and any history of child abuse was denied.

A history of similar lesions in another location in the child, parents or cohabiting was denied and possible sexual abuse denied. Her mother was free of condyloma and allegedly had no HPV infection during pregnancy. Gynaecological assessment of the

mother's studies results was negative. Psychological evaluation of the child showed no signs of possible abuse and social assessment concluded there was no context of risk.

On examination, her underwear showed stains of discharge and blood. She had quite extensive cauliflower like polypoid papillomatous lesions around the urethral opening and two kissing pedunculated vulval lesions anteriorly and posteriorly with clear discharge and bleeding on touch on the inner aspects of her labia minora (figure 1A). Lesions consisted of numerous almost translucent papules. Vaginal opening and perineum including perianal region were clear (figure 1B).

INVESTIGATIONS

Urine dipstick, microscopy and culture were normal. Haematological and biochemical tests including inflammatory markers were within normal limits. Swabs from the discharge did not grow any organisms including herpes, chlamydia, gonococci, etc. Serology for venereal diseases was negative. HIV status of mother and the patient was negative.

DIFFERENTIAL DIAGNOSIS

A provisional diagnosis of vulval, satellite vestibular and periurethral papillomatosis was performed. Possibility of underlying viral, fungal or microbial sexually transmitted infections with child protection issues were considered and investigated.

TREATMENT

The patient underwent examination under anaesthesia, cystourethroscopy and excisional biopsy of vulval, satellite and periurethral lesions of condylomatous type uneventfully.

Histology showed evidence of papillomatous squamous epithelium with multinucleation of some keratocytes suggestive of HPV-associated change with nuclear polymorphism, increased mitotic activity, koilocytosis and dyskeratosis of the epithelium associated with basal cytological atypia amounting to VIN1. Immunohistochemistry showed nuclear staining for low-risk HPV subtypes 6/11 in the epithelium and was negative for high-risk HPV subtypes 16/18 and p16. The features were of HPV associated viral wart (CA). The immunochemical stains for M1B1 showed increased labelling within basal epithelial cells in keeping with VIN1.

The slides were reviewed by regional paediatric vulval services in vulval pathology clinic and showed some inflammation but no signs of VIN. It may well be the inflammatory component had led to some atypical features.

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Figure 1 (A) Preoperative clinical photograph showing giant periurethral and vulval papillomatosis. (B) Peroperative photograph: note the pericatheter cauliflower like lesion.

OUTCOME AND FOLLOW-UP

Follow-up at 9 months showed vulva, vestibule and periurethral area completely normal and free from any lesions and all lesions have completely resolved and the child is thriving well.

DISCUSSION

CA, which is a large cauliflower-like papillomatous tumour, has been linked to HPV types associated with skin warts. It could be an indicator of possible sexual abuse in children. CA has been thought to be rare in the paediatric age group because the mode of transmission is venereal.⁴

CA in children is a diagnostic difficulty due to the possibility of infection by sexual transmission, although it should be taken into account that non-sexual transmission of this sexually transmissible disease is very frequent in childhood as is evident in our case.

HPV may be acquired via sexual transmission, vertical transmission or extragenital contact. There was no evidence of sexual abuse, vertical transmission or any other sexually transmitted disease in the clinical evaluations performed on our patient, extragenital contact appears to be the most plausible explanation. In contrast, non-sexual transmission of CA occurs frequently between children and caregivers. Nonsexual-CA is present almost exclusively in the mucosal epithelium in children.

CA is a rare condition with a wide disease spectrum in children and there is no consensus regarding the optimal treatment. Conventional treatment options for genital warts (CA) in children rely on chemical (podophyllotoxin) and physical destruction methods that can be difficult, painful and variably effective with high recurrence rates and frequently require the use of general anaesthesia. Intraurethral fluorouracil and lidocaine instillation is effective in CA.

Other modalities include the use of immunotherapies, such as topical imiquimod 5% cream, cimetidine and intralesional or systemic interferon. Imiquimod is a recently developed imidazoquinoline heterocyclic amine that is an immune response modifier.^{2 7} Pulsed dye laser has been found to be safe, effective, satisfactory and less traumatic compared to other options for treatment of perianal warts in children.⁸ The technique of

ultrasonic surgical aspiration for the treatment of genital CA under general anaesthesia resulted in minimal discomfort, rapid healing and no scarring. Electrocautery fulguration and cryosurgery have been used successfully.

Our case testifies the safety and effectiveness of surgical excision and in addition it allows easy availability of tissue for histological/histochemical examination and classifies the type of lesions accurately. Indications for surgical treatment include large, recurrent or refractory lesions, as well as the need for histological identification and acquiring tissue for immunotherapy when necessary.

The strategy of an extended follow-up is recommended so as to ensure identification of any risk situations that might have been previously missed and to alert the appropriate community agency for follow-up.⁴

Learning points

- ▶ Genital warts in the form of giant alarming vestibular, vulval and periurethral lesions of condyloma acuminatum are very rare in children.
- ▶ There is need for a multidisciplinary approach with potential sociomedicolegal implications.
- ▶ Surgical excision is safe, effective and provides opportunity to assess the extent of the lesion and tissue for accurate diagnosis.
- ▶ Indications for surgical treatment include large, recurrent or refractory lesions, as well as the need for histological identification and acquiring tissue for immunotherapy when necessary.
- ▶ The strategy of an extended follow-up is recommended so as to ensure identification of any risk situations.

Competing interests None.

Patient consent Obtained.

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