

Treatment of a Giant Genital Wart in an Infant via Cryotherapy: Report of Case

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Abstract

Human papilloma virus (HPV) infection is a very common infection of skin and mucosa of children and adults (1- 6). Anogenital warts are a common type of HPV infection in sexually active adults, however it is seen in any age. The importance of presence of genital warts is different between adults and children in respect to differential diagnosis, associations, complications and also treatment options. We report a 3 month-old child with a giant genital wart treated via cryotherapy.

Key words:

Anogenital warts, Cryotherapy, HPV

Introduction

Human papilloma virus (HPV) infection causes warts. There are more than 100 varieties of human papilloma viruses. Different types of HPV infection can cause warts on different parts of the body. Some types of HPV infection cause plantar warts on the feet, while other varieties of HPV infection are responsible for the warts that most commonly occur on a person's hands or face. There are more than 40 different strains of HPV that specifically affect the genital area. Most HPV infections do not lead to cancer, but some types of genital HPV can cause cancer of the cervix. Genital warts may appear as flat lesions, small cauliflower-like bumps or tiny stem-like protrusions. In women, genital warts appear most commonly on the vulva but may also occur near the anus, on the cervix or in the vagina. In men, genital warts may appear on the penis and scrotum or around the anus. Genital warts rarely cause discomfort or pain. Vaccines can help protect against the strains of genital HPV most likely to cause genital warts or cervical cancer.^(1,6)

Genital warts are different between adults and children with respect to diagnosis, and treatment options. We report a 3 month-old child, with a giant genital wart.

Case report

A 3 month-old boy was referred to our clinic

with a history of a growing mass on penis for 2 months; clinical examination revealed vegetative hyperkeratotic papules covering almost the whole glans penis (Fig.1).



Fig.1. Lesion covering the entire glans

He had history of circumcision at 12 days after birth with normal wound healing course. The lesion appeared about 3 weeks later, and had grown. There was no other abnormal finding in his history and physical examination. He was referred to an urologist for consultation with a clinical diagnosis of verruca, epidermal nevus, and squamous cell carcinoma. An incisional biopsy was taken. Histological examination showed marked papillomatosis with para and orthokeratotic hyperkeratosis, mild lymphocytic

infiltration in superficial dermis with dilated capillaries in dermal papilla. There were clear viral cytopathic changes in keratinocytes of the upper Malpighian layer (Fig.2) and diagnosed as a wart..

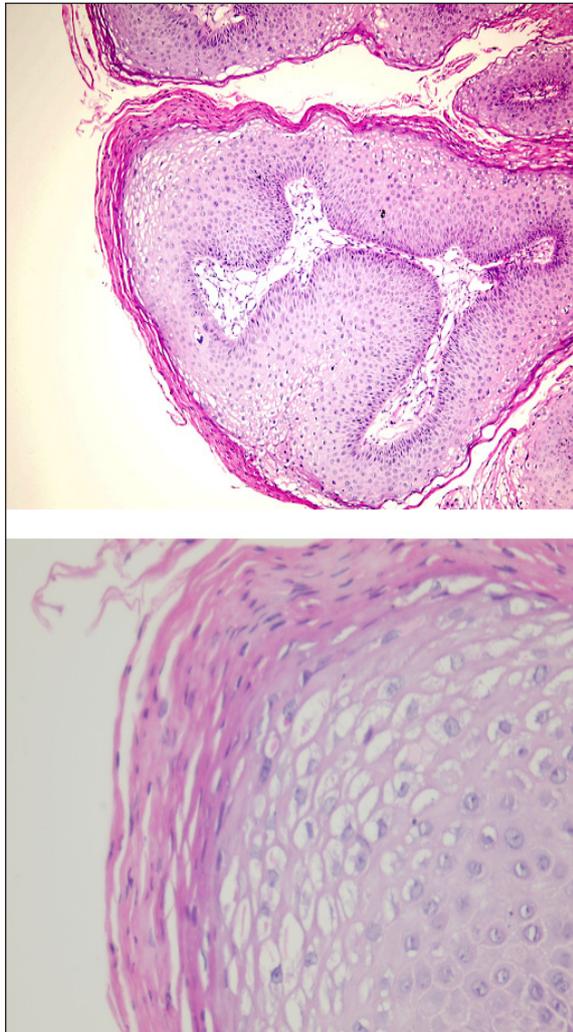


Fig.2; Histological appearance of the lesion, H&E staining, x 40 and x 400 respectively.

For treatment options the case was referred to the dermatology clinic. Considering size and site of lesion, age and treatment safety, cryotherapy was done judiciously every week with liquid nitrogen. The clinical response was fair (Fig.3) After 5 sessions the lesion cleared completely leaving a small area of denuded skin near the meatus which was the site of continuous contact with a napkin. On follow up 6 months later there was no recurrence but the contact site of the glans was not re-epithelized completely (Fig.4). Avoidance of using napkins was suggested.



Fig.3. Lesion site after 3 sessions of therapy



Fig.4. Photograph after 6 months

Discussion

In adults common lesions such as seborrheic and solar keratosis, nevi, acrochordons, sebaceous hyperplasia, clavi, small pyogenic granuloma, or SCC may resemble a verruca.⁽¹⁾ In children, verruca should be differentiated from congenital lesions. There are several variants of epidermal naevi (EN), which, to the less experienced, can be mistaken for warts.⁽⁷⁾ Two patients were reported with penile lymphangioma circumscriptum. The lesions resembled molluscum contagiosum in one and genital warts in the other.⁽⁸⁾ Also a vulval lymphangioma circumscriptum case, clinically diagnosed as genital wart has been reported.⁽⁹⁾ The diagnosis was confirmed by histological examination in our case.

Anogenital warts in adults are usually considered as a sexually transmitted disease but its importance is different before the age of adolescence. All children with symptoms

pertaining to their genitourinary system should be evaluated thoroughly for sexual abuse.^(1,2,4,10,11) Perianal viral warts occasionally occur in infants and young children, but they are normally seen in young adults, and are not always sexually transmitted.⁽¹²⁾ Most cases of anogenital warts in children are likely to be the result of non-sexual transmission.^(13,14,15) Absence of other physical evidence of molestation, location of the warts on fully keratinized skin as opposed to genital or anal mucosa, a clinical resemblance to common warts, and young age of the child, perhaps up to 1-2 years at the onset of the warts, would tend to support nonsexual transmission.^(1,12,13,15) There remains no clear age below which abuse is never a concern for children with anogenital HPV infection.⁽¹⁵⁾ We did not find any evidence of sexual abuse or child abuse in our case and because of its appearance after circumcision, we considered traumatic epithelial disintegration as a predisposing factor for viral inoculation in the same session or later during wound care.

Although cutaneous warts are one of the most common skin conditions affecting children, their management can be challenging, especially in complex cases⁽³⁾. There is no anti-papilloma virus drug and management of HPV is mostly due to preventive methods and nonspecific destruction. HPV infection is a risk factor for anogenital cancer, particularly of the cervix and anus and is associated with the clinical expression of penile carcinoma in situ (PCIs).^(1,6,16,17) HPV specific vaccines are used for prevention and treatment of benign and malignant HPV-associated tumors of the genitoanal tract in adults of both sexes^(6,18), but is not accepted generally for younger males or females because it is unknown whether there is a disease correlation in children chronically infected with oncogenic HPVs.⁽⁵⁾ Also HPVs involved in etiology of childhood genital warts are of different types usually not related to oncogenic ones.

HPV genital infection remains a treatment dilemma.^(4,19) The management of warts depends on the degree of physical and emotional discomfort, the extent and duration of lesions and the patients' desire for therapy.^(1,19) Children with common warts may not require treatment as spontaneous regression is common.⁽¹⁾

There is still no gold standard therapy.^(16,19)

The existence of multiple treatment modalities reflects the fact that none are uniformly effective or directly antiviral.^(4,6,10,16,19) The choice of treatment depends on the location, size, number and the type of wart, as well as on the age and cooperation of the patient.^(1,19) Destructive methods are used to remove infected epithelial cells, to decrease viral load and to stimulate host immunity. With all types of treatments, recurrences are frequent.^(1,19) Recurrences can be expected in about 25% of cases, with the interval varying from 2 months to 23 years.⁽¹²⁾

Purified podophyllotoxin (condylox) has activity that is uniform from batch to batch and is approved for treatment of genital and perineal warts⁽¹⁾, but it was not appropriate for children because of more susceptibility to systemic absorption, especially in our case with such an extensive lesion. Home use of salicylic acid preparations can be particularly efficacious in young children who cannot tolerate other modalities.⁽¹⁾ However that was not effective and practical for our case, because of lesion size and location. Warts may be curetted or surgically excised, particularly large anogenital warts unresponsive to topical treatments⁽¹⁾, which in this case there was the problem of defect reconstruction and the risk of potential complications. Cryotherapy using liquid nitrogen applied with a cotton tip or a spray canister to achieve a halo of ice in and around the lesion is a standard and effective treatment for most warts.^(1,10) We chose cryotherapy for treatment of this difficult case, because: it does not need anesthesia, is very safe in experienced hands, is not followed by denuded skin, and is very easy for parents to manage the treated area; actually nothing more is needed to be done by them. Our case completely cleared after 5 treatment sessions and the 6 months follow-up revealed no recurrence.

Conclusion

We conclude that cryotherapy can be an effective, safe and practical method for treatment of unusual anogenital warts in children.

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