Severe Anogenital Warts in a Child with HIV Infection: A Case Report

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SUMMARY

Objective: To highlight the possibility of nonsexual transmission of anogenital warts in children.

Materials and Methods: An illustration using a case that presented to the author.

Results: A five year old HIV-positive girl (vertically transmitted) with anogenital warts of 19 months duration is presented. She had never been sexually exposed. She responded well to treatment with Podophyllin solution applied topically twice weekly for a duration of two months. She is presently on highly active antiretroviral therapy.

Conclusion: A good history and physical examination are of essence in the evaluation of anogenital warts in children. The likelihood of sexual abuse should be entertained but nonsexual modes of transmission can occur.

Niger Med J. Vol. 48, No. 2, April – June, 2007: 49 – 50.

KEYWORDS: **Anogenital warts, HIV, child**

INTRODUCTION

Warts are caused by human papilloma viruses (HPVs). HPVs have gained increasing interest because of their potential role in the pathogenesis of malignant tumors. While genital HPV infections seem to affect predominantly adult, sexually active age groups, cutaneous warts at various anatomic sites, and oral mucosal warts, typically affect children.

However, anogenital (AG) warts have also been described in children[1]. In one study in Ibadan, southwest Nigeria, among patients attending the sexually transmitted diseases clinic, 10 out of 148 patients with AG warts were children aged less than 9 years[2].

The modes of viral transmission in children remain important and controversial. Several potential modes of transmission have been theorized for these infections, including perinatal transmission[3-5], auto- and hetero-inoculation[6], sexual abuse[7], and possibly indirect transmission via fomites[8]. Among children presenting with AG warts in a hospital in Togo, there was a hundred percent concomitant history of sexual abuse[9].

Table 1 outlines the potential routes of transmission of the HPV to the child.

Table 1*: Modes of HPV transmission in children.

Modes of HPV transmission in children
(1) Non-sexual transmission
Directly
- from one person to another
- auto-inoculation
Indirectly
- via contaminated objects
- via contaminated surface
(2) Maternal transmission
Directly
- during vaginal delivery from the mother
- at Caesarean section/early rupture of membranes
- from mother when taking care of the baby
- via saliva?
- via breast milk?
Indirectly
- during vaginal delivery via contaminated objects or surfaces
- when born by Caesarean section via contaminated objects or surfaces
Transmission, *in utero*
- through semen
- ascending infection from mother's genital tract
- transplacentally
(3) Sexual abuse

*Culled from Ref. 8

CASE REPORT

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A 5 year old girl presented to the Paediatric HIV Clinic of Nnamdi Azikiwe University Teaching Hospital, Nnewi with vulval growth for 19 months. These initially started as an itchy rash and gradually progressed into an irregular mass involving the entire vulva and adjoining anal region. The lesion made micturition and ambulation painful and difficult.

She had a vertically transmitted HIV infection. There was no history of sexual molestation. The patient is the fourth child of her mother. Her mother got married and had three children before her husband died of cancer 9 years previously. The patient was conceived out of wedlock. The mother also has another set of twins for another consort different from the patient's biological father. There is no history of genital warts in the mother who is HIV- positive. All siblings are HIV-negative.

Examination revealed a well-nourished, distressed girl, who was neither febrile nor pale. There was an embarrassing fetid odour emanating from her. She had generalized lymphadenopathy and enlarged firm, non-tender parotid glands. The entire vulva, vagina and perianal region was covered with a fungating cauliflower-like mass with areas of necrosis (see Figure 1). There was a putrid discharge from the mass. The

patient sat on one gluteal mass at a time and was in pains. All the other systems were essentially normal. She weighed 18kg and had a height of 117.5cm (all appropriate for age).

She was admitted into the ward. Complete blood count, urinalysis, HIV serology, CD4 count and liver function tests were carried out. Voluntary counselling and testing for HIV were offered to her mother and siblings.

She was placed on metronidazole, ampicillin-cloxacillin, gentamicin, vitamin supplements and acetaminophen, in addition to bid Sitz baths in warm potassium permanganate solution. A gynaecologic review was also sought. After five days on the above regimen the odour and discharge were controlled. Podophyllin solution was applied to the lesion twice weekly and because of the severe accruing pain daily piroxicam and diazepam nocte were added to the regimen. The lesion responded to therapy, and within an 8-week period had cleared.

Results obtained were: CD4+ lymphocytes 461 cells/µL (22.7%); total white cells 5.8 x 10^9cells /L; lymphocytes 2.03 x 10^9/L and polymorphs 3.77 x 10^9/L; platelets 354 x 10^9/L; haemoglobin 10.3g/dL, haematocrit 33.3%; MCHC 30.9; MCH 25.7; MCV 83fl; red blood cells 4.01 x 10^9/L.

She has been commenced on antiretroviral drugs – nevirapine 126mg, zidovudine 80mg and lamivudine 72mg all twice daily dosing. She has been discharged and is being followed up.

DISCUSSION

Anogenital warts in children may have serious medical, social, and legal implications. Issues such as sexual abuse of the child, transmission of the virus from the mother to the child as well as the potential for the future development of anogenital malignancies in children with anogenital HPV infections constitute cause for concern.

In the case presented, the author is of the view that the route of transmission was most probably vertical, from mother to child, during delivery, in view of the fact that both child and mother blatantly denied any sexual exposure. Vertical transmission of HIV had already been established in the mother-child pair.

The link between AG warts and sexual abuse in children requires an understanding of wart transmission and incubation period to properly interpret their significance[10]. It is important that primary care providers have an understanding of the appearance, mode of transmission, and incubation period of human papilloma virus in children to ensure proper management.

Podophyllin, 5-fluorouracil, and interferons are no longer recommended for use in primary care because of their low efficacy and toxicity[11]. Recommended treatments that can be used in the out-patient setting include trichloroacetic acid[12] or physical ablation using cryotherapy[12,13], electrosurgery, excision or laser treatments[12,14]. Podophyllin solution was used in this patient owing to the extensive nature of the lesion, which if excised would result in enormous morbidity and pain.

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