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Case report Open Access

Ranitidine therapy for genital warts in children: case report and literature review

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Abstract

OBJECTIVIE: Report a case of a child with anogenital wart, caused by human papillomavirus (HPV) treated with ranitdine.

METHOD: We present the case of a child with anogenital wart, caused by HPV, treated successfully with the use of ranitidine and the review of the literature.

RESULT: Infant, female, one year and six months. Sought medical attention for the appearance of verrucous lesions in anogenital region with three months of evolution. Previously healthy child, no comorbidities or history of immunodeficiency. We proposed therapy with oral Ranitidine (VO) at the dose of 4 mg / kg / dose, administered 12/12 hours. After 90 days of treatment, it was observe complete remission of the lesions.

CONCLUSION: The use of histamine H2 receptor blockers, represented here by oral ranitidine, is a safe and effective option for the treatment of anogenital warts in children. Prospective and randomized studies are necessary to corroborate our findings.

Introduction

HPV infection is prevalent in the population due to its transmission by direct contact with infected skin or mucosa and by indirect transmission through secretions. It can manifest itself in a variety of ways depending on the infecting subtype, the site of infection and the cellular immunity of the host. Anogenital warts are mostly caused by subtypes 6 and 11 and have a low risk of malignancy.

Its appearance in children is rare. It may be correlated with vertical transmission, also called mother-to-baby transmission, during passage through the maternal birth canal, or due to self-inoculation, from common cutaneous warts. Transmission also occurs through sexual intercourse, and the possibility of underlying sexual abuse should always be excluded in the evaluation of these patients.

Several forms of treatment have already been described, among them the surgical flashing of the lesions and the use of cryotherapy or chemical cauterization. In the pediatric population, it is necessary to use general anesthesia for most of the existing therapeutic options, within the high possibility of recurrence of the lesions and the risk of local scar formation.

In view of this, some authors have proposed the use of histamine blockers, initially cimetidine, for the treatment of such lesions, believing in their local immunomodulatory function, and benefiting of the treatment can be performed only orally, at a lower cost and patient benefits over other topical treatments already studied.

CASE REPORT

Infant, female, 1 year and 6 months, brought to a consultation by histories of appearance of lesions in anogenital region for 3 months. No other signs and / or associated symptoms. No history of local itching or vaginal discharge. Healthy newborn child with no comorbidities. The chance of underlying sexual abuse in the patient was excluded.

During the physical examination of the child, we noticed a female genitalia with no dystopias, a normal-appearing hymen and multiple verrucous lesions in the vaginal opening, small lips, vulvar region and also in the perianal region (Figure 1). The verrucous lesions were exuberant, consistent with the diagnosis of condylomata acuminata.

Figure 1

In the medical consultation, we list the possible therapeutic options for family members, with their benefits and harms. Due to the extent and location of the lesions and the adverse effects of the usual therapies, opted to start ranitidine orally at a dose of 4 mg / kg / dose administered 12/12 hs. The therapeutic presentation used in this case was ranitidine in drops.

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In the first medical return, 30 days after the beginning of the proposed treatment, the lesions disappeared in the vulvar region, and the lesions remained in the perianal region, in a smaller amount. At 60 days, there was a considerable reduction of the lesions in the perineal region and at 90 days total disappearance of the lesions. (Figure 2)

Figure 2

DISCUSSION

Among the spectrum of diseases caused by HPV, the warts flash, with the most different characteristics, and can be classified according to their histopathological finding or their location. In the anatomopathological findings, we found hyperproliferation of coilocytes, hyperkeratosis and papillomatosis. Its spontaneous resolution, without the use of therapeutic methods, occurs in 23% of cases in 2 months and in up to 78% of cases in 2 years, according to Sinha S, et al. (1)

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The rate of recurrence after surgical or chemical excision of the lesions remains high about 5 to 50% according to Karaman, (2) demonstrating a relative immunodeficiency characteristic of the individuals with the disease. Hypotheses described as a deficiency of production of T-type memory lymphocytes to HPV infection, failure of clonal lymphocyte expansion to adequate stimulation and inability of T lymphocytes to transit at sites of infection as described by Scheinfield et al. (3).This hypothesis is corroborated by the exuberance of lesions presented by renal transplant patients and patients with acquired immunodeficiency with giant condyloma acuminata. (4)

Based on the natural history of the disease and its high rate of recurrence, and in the immunomodulatory effects of Cimetidine, Glass and Solomon initiated research in adults using Cimetidine in high doses, with good effectiveness in the treatment of recurrent warts, finding cure rate greater than spontaneous resolution, demonstrating its effectiveness and safety and not just acting as placebo. (5)

In the case of the pediatric population, ranitidine is preferentially used because of its safety and its large-scale use for treating gastroesophageal reflux disease in children. The exact mechanism of immunomodulation of ranitidine is not known but is believed to be due to blocking of histamine receptors present on the surface of suppressor T lymphocytes leading to increased production of interleukin 2 and other inflammatory mediators. (6)

A study using adults with recurrent warts and high dosage of ranitidine showed promising results with 48.7% of patients, presenting complete response at the end of treatment and 25.7% presenting partial response, and no patient showing disease evolution during treatment. In all patients who presented a satisfactory response to the treatment, resolution of the lesions occurred between the sixth and eighth weeks of treatment. (7) In the case of our patient, complete remission of the lesions occurred after 12 weeks of treatment.

The side effects reported with ranitidine are rare, occurring in less than 0.1% of cases, ranging from dyspnea to mild rash. Even when used in high doses, none of the reviewed studies cited an adverse reaction or side effect to medication (5, 6 and 7).

No double-blind placebo-controlled study was conducted in children so far due to the efficacy of other therapeutic methods described and the self-limited evolution of the disease, with spontaneous improvement in 80% of cases in 2 years follow-up in the case of warts vulgarities caused by HPV. However, warts in the anogenital region, as in the present case, rarely present spontaneous remission, in addition to the discomfort generated for the child and the parents. (9)

Surgical excision of the lesions with electrocoagulation or cryotherapy is a viable option, but it requires the use of sedation or general anesthesia in the pediatric age group to perform it, placing the child under the inherent risks of the surgical procedure, and sometimes requiring several sessions due to the known recurrence rate of the disease. Scars are possible and described complications of this technique and when present in the perineal region can bring with them functional problems, such as stenosis or anal incontinence, due to the proximity to the anal sphincter.

On the other hand, the use of topical treatments causes ardence, discomfort and the possibility of injury of perilesional healthy tissue, making its use infrequent and indicated with restrictions in the pediatric population, especially in infants and preschool children

CONCLUSION

It is concluded that the treatment of anogenital verrucous lesions in children caused by HPV can be performed safely and effectively with the use of high-dose histamine blockers, preferably using ranitidine for the pediatric population due to their safety clinic, its vast experience and allied to its low cost.

Randomized clinical trials are required to prove their efficacy compared to established therapy. However, the need for general anesthesia for surgical fulguration, added to the risk of scarring and unaesthetic effects, should be taken into account when choosing the best treatment to be applied.

Low cost, safety of medication and studies demonstrating its effectiveness, allow us to judge that the use of ranitidine for the treat

ment of anogenital warts is clinically useful in children.

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