Case report

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Condylomata acuminata in childhood treated with 5% imiquimod cream: case report

Condiloma acuminado na infância tratado com creme de imiquimode a 5%: Case report

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ABSTRACT

DNA-virus, which belongs to the papillomavirus group, causes Condylomata acuminata. In children under 3 years of age, transmission tends not to be due to sexual abuse but rather vertically. There is no consensus for the treatment of anogenital warts in children. The chosen method is individualized for each patient, preferring less traumatic treatments, with fewer sequelae. Although there are still some restrictions on the imiquimod use in children under 12, studies have already shown this therapy's success in this age group. We report a case treated with 5% imiquimod cream with the resolution of pre-existing lesions.

Keywords: Condylomata Acuminata; Papilloma; Warts

RESUMO

O condiloma acuminado é causado pelo DNA-vírus, que pertence ao grupo papovavírus. Em menores de três anos, a transmissão tende a não ser por abuso sexual, mas, sim, de maneira vertical. Não existe consenso para o tratamento das verrugas anogenitais em crianças. O método escolhido é individualizado para o paciente, sendo a preferência por tratamentos menos traumáticos, com menor sequela. Embora ainda existam algumas restrições ao uso do imiquimode em menores de 12 anos, estudos já mostram o sucesso desta terapêutica nesta faixa etária. Será descrito um caso tratado com imiquimode creme a 5%, com resolução das lesões preexistentes.

Palavras-chave: *Condiloma Acuminado; Infecções por Papillomavirus; Verrugas*

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INTRODUCTION

Condylomata acuminata is caused by the DNA-virus, which belongs to the papillomavirus group, also known as HPV.[1] It is associated with viral types 6, 11, 30, 42, 43, 44, 45, 51, 52, 54, and it is possible to exist more than one subtype in a lesion.[2] Physical examination characterizes it as vegetating lesions, with sessile papules (seen in the raphe of the penis), and pink, moist projections resembling a cauliflower. These lesions are in the genital and perigenital region and may affect the urethral, rectal, or vaginal areas. Studies show that the association between HPV and sexual abuse increases directly with age, especially after five.[3]

Most studies show that HPV infection in children does not necessarily mean sexual contact, and other forms of contamination should be considered.[4] A survey conducted with 42 prepubertal children with anogenital condyloma showed that 28.6% of them acquired HPV by vertical transmission, 7.1% resulted from the autoinoculation of warts located on the hands, and only 4.8% were associated with sexual abuse.[3]

The treatment of Condylomata acuminata in children requires greater attention, as ablative procedures and laser surgeries are painful and require general anesthesia in the vast majority. Among other treatment options is topical imiquimod 5%, even though its use in children has not yet been fully defined, unlike in the adult population that responds well to therapy, with a favorable resolution of lesions.[5]

CASE REPORT

One year and six months old male patient presented to consultation with his companion (mother), who has referred perianal and scrotum lesions on the patient for six months, with a progressive increase in number and size. Physical examination revealed erythematous papules in the scrotum and inguinal region, others confluent forming a plaque with a vegetative aspect, with a pink color, affecting the perianal area (Figure 1). The patient was born by normal delivery, at term, and without complications. The mother had a history of ovarian cancer and denied genital or extragenital lesions. The father and two brothers were also assessed, with no evidence of suspicious lesions. Serologies (syphilis, HIV, hepatitis B and C) were requested from the patient and parents, all negative. They were referred to the coroner to rule out sexual abuse. The patient was referred to the pediatric surgeon for evaluation and biopsy. While waiting for the consultation with the professional, we decided to start imiquimod cream 5%, twice a week. In three weeks, we observed a significant improvement of the vegetative and papular lesions. As an adverse event, we perceived moderate erythema (Figure 2). The treatment was conducted for seven weeks (Figure 3).

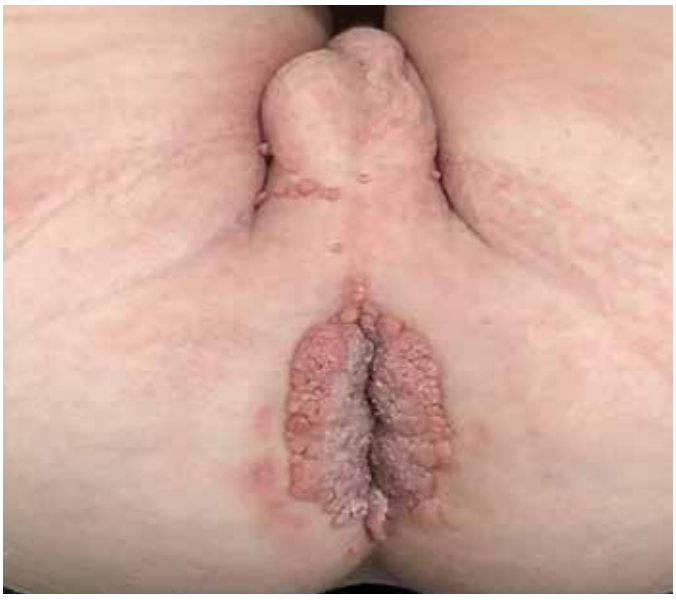

Figure 1: Erythematous papules in the perineum region, scrotum, inguinal region, associated with the vegetating plaque in the perianal region

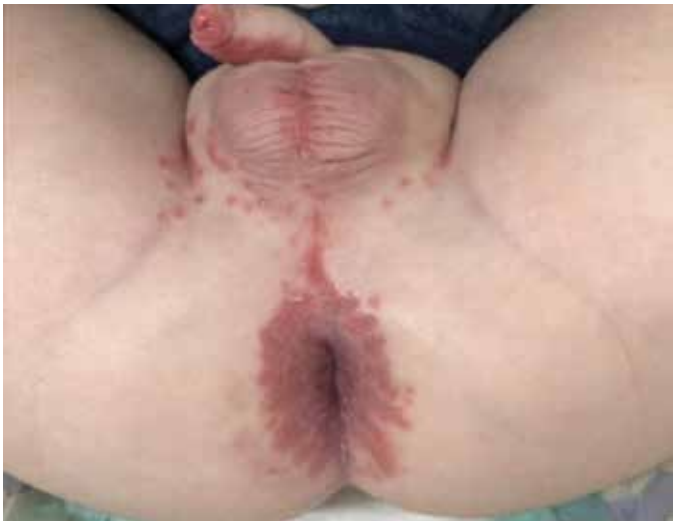

Figure 2: Presence of hyperemia in the perianal, inguinal region, and penis body after three weeks of treatment with imiquimod

DISCUSSION

Condylomata acuminata appears in 10% of cases of sexually transmitted infection (STI). When found in childhood, there must be a suspicion of sexual abuse.[3] Anogenital warts cases are progressively increasing in children, but it appears to be due to an increase in lesions in adult women.[4]

When found in the age group of children under three years of age, transmission tends to be in other ways. The most common is vertical (through the birth canal) since some authors described an incubation period of one to three years, or it can occur an ascending infection. There are cases of autoinoculation and heteroinoculation and, also, transmission by fomites. Even though it is not the most common form in that age group, sexual abuse must not be ruled out in any case of Condylomata acuminata.[3,4] If sexual abuse is suspected, it should be investigated. If confirmed, the Guardianship Council has to be contacted with social assistance. The physical examination must be complete, trying to exclude warts in other regions.[3]

There are several types of treatments in cases of Condylomata acuminata, including surgical excision and C02 laser, in addition to topical treatments using imiquimod cream 5%. The recommendation is to apply the medication in the affected area three times a week, for 16 weeks, generating irritation and inflammation, with lesions' resolution. Another topical treatment is fluorouracil cream 5%, with recommended daily use until irritation appears. Podophyllin 25% is another option, applied to the lesions and washed after four hours, but is contraindicated

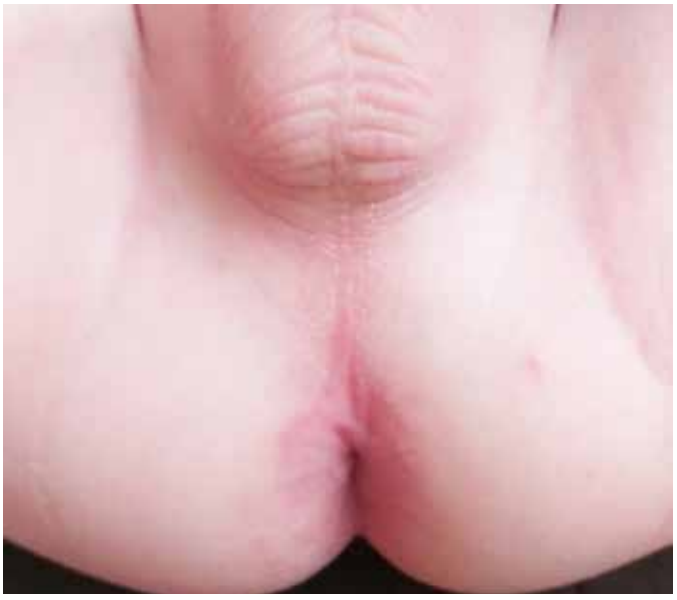

Figure 3: Total lesion regression after seven weeks of treatment with imiquimod

in children and pregnant women.[6] Other options are chemical cauterization with trichloroacetic acid 50-70%, cryosurgery, and shave removal with electrocoagulation of the base.[7]

All these treatments are effective and safe in the adult population. However, when treating condyloma in children, the ideal would be that therapies present low cost, effectiveness and cause no trauma. Nevertheless, all these characteristics are not yet available to the entire pediatric population. The most used treatments are chemical or mechanical destruction of the lesions through cryocauterization, electrocauterization, or loop diathermy, all of which are painful and, in the great majority, requiring general anesthesia. Some studies show efficacy and safety with topical treatment with imiquimod cream 5% in children under 12, even though its use in this age group has not yet been fully defined.[7,8] The method chosen is individualized for each patient, with a preference for less traumatic treatments, which will evolve with fewer sequelae. [8]

Imiquimod is a topical immunomodulator, agonist of toll-like receptors 7, which can mediate the innate and cellular immune response and stimulate interferon (IFN) production and cytokines that lead to the destruction of collagen. Also, it acts on antigen-presenting cells, showing HPV antigens with greater effectiveness to CD4+ T lymphocytes. In addition to inhibiting HPV replication by 90%, thus decreasing viral load, it prevents recurrences by releasing cytokines, tumor necrosis factor-alpha, and IFN-alpha.[1]

The effect of imiquimod mimics the normal immune response, increasing the release of IFN, which is antiviral, preventing proliferation and angiogenesis, also increasing the amount of messenger RNA from the CD4 + T lymphocytes at the site. It may still have the effect of anti-HPV immune memory, thus significantly reducing the recurrences of lesions.[1]

When using this topical medication in children, these patients will have no disadvantages such as pain. Also, they can be treated in their own homes, being a medication with few adverse events. Among adverse events, it is possible to occur erythema, itching, burning, erosion, and greater sensitivity at the application site. Although quite unusual, patients may also experience systemic symptoms such as fatigue, fever, myalgia, central and peripheral nervous system changes, and gastrointestinal symptoms.[5]

In one study, it was possible to observe the success in treating children aged six months and 19 months after applying imiquimod for three and eight weeks, respectively. Despite having erythema around the lesions frequently, no other adverse events of importance occurred in these cases, as in our case.[5]

This case of Condyloma acuminata in children, which achieved therapeutic success with the use of imiquimod cream 5%, proved that this therapy is a good alternative to conventional treatments that, in most cases, have associated pain and even sequelae and trauma to children. ●

REFERENCES

1. Azulay RD, Azulay DR, Azulay-Abulafia L. Azulay Dermatologia. 6th ed. Rio de Janeiro: Guanabara Koogan; 2015. p. 447-8 e p. 1011.
2. Belda Júnior W, Di Chiacchio N, Criado PR. Tratado de dermatologia. 2nd ed. São Paulo: Atheneu; 2014. p. 1135 e p.1936.
3. Drezett J, Vasconcellos RM, Pedroso D, Toledo Blake MT, Oliveira AG, Abreu LC. Transmissão de verrugas anogenitais em crianças e associação com abuso sexual. J Human Growth Develop. 2012;22(1):1-11.
4. Hornor G. Ano-Genital warts in children: sexual abuse or not? J Pediatr Health Care. 2004;18(4):165-70.
5. Brandt HRC, Fernandes JD, Patriota RCR, Criado PR, Junior WB. Tratamento do papiloma vírus humano na infância com creme de imiquimode a 5%. An Bras Dermatol. 2009;84(5):549-53.
6. Moresi JM, Herbert CR, Cohen BA. Treatment of anogenital warts in children with topical 0,05% podofilox gel and 5% imiquimod cream. Pediatr Dermatol. 2001;18(5): 448-52.
7. Rehme MFB, Carvalho NS, Ihlenfeld MFK, Chuery ACS. Condiloma acuminado em crianças e adolescentes. Rev Bras Ginec Obst. 1998;20(7):377-80.
8. Veasey JV, Antonia MD, Miguel BAF, Mayor SAS, Campaner AB, Manzione TS. Anogenital condylomas in children: descriptive analysis of 20 cases. Surg Cosmet Dermatol. 2017;9(2):130-3.

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