

GIANT CONDYLOMATA ACUMINATA OF BUSCHKE-LOWENSTEIN: SURGICAL METHOD AS EFFECTIVE TREATMENT AND IMIQUIMOD AS ADJUVANT THERAPY IN AN IMMUNOCOMPETENT PATIENT

CONDILOMA ACUMINADO GIGANTE DE BUSCHKE-LOWENSTEIN: MÉTODO CIRÚRGICO COMO TRATAMENTO EFICAZ E IMIQUIMODE COMO TERAPIA ADJUVANTE EM UMA PACIENTE IMUNOCOMPETENTE

Helena Lucia Barroso dos Reis¹ , João Victor Jacomele Caldas² , Carolina Azevedo Feltz²,
Danielle de Oliveira Machado², Lucas Donateli Rosa, Marize de Freitas Santos Neves⁴,
Dennis de Carvalho Ferreira⁵ , Antônio Chambo Filho⁶ , Neide Aparecida Tosato Boldrini⁴ 

ABSTRACT

Introduction: Giant condylomata acuminata, also known as Buschke-Lowenstein tumor is a rare form of tumor of the anogenital condylomata acuminata, which is a sexually transmitted infection (STI) caused by the human papillomavirus (HPV). **Objective:** To report a case of giant condylomata acuminata in an immunocompetent patient. **Case report:** The patient was referred to the Outpatient Clinic for Sexually Transmitted Infections and AIDS at a public hospital in the city of Vitória, Espírito Santo State, Brazil, reporting the onset of progressive growth verrucous lesions on the external genitalia for four months. The patient underwent surgical ablation, and giant condylomata diagnostic confirmation was obtained through histopathology. She was treated with 5% imiquimod cream in routine applications for eight consecutive weeks to avoid recurrence and was also vaccinated for HPV after the procedure. **Conclusion:** Surgery excision is the treatment of choice in extensive genital condylomata lesions to exclude malignancy. Imiquimod use as adjuvant therapy for reducing recurrence seems to be adequate.

Keywords: Papillomavirus infections; imiquimod; condylomata acuminata.

RESUMO

Introdução: O condiloma acuminado gigante, também conhecido tumor de Buschke-Lowenstein, é uma apresentação rara do condiloma acuminado anogenital, que é uma infecção sexualmente transmissível (IST) causada pelo papilomavírus humano (HPV). **Objetivo:** Relatar um caso de condiloma acuminado gigante em uma paciente imunocompetente. **Relato de caso:** A paciente foi encaminhada para o ambulatório de infecções sexualmente transmissíveis e AIDS de um hospital público na cidade de Vitória, Espírito Santo, Brasil, relatando o aparecimento de lesões verrucosas de crescimento progressivo na genitália externa por quatro meses. A paciente foi submetida à exérese cirúrgica e a confirmação diagnóstica de condiloma gigante foi obtida através da histopatologia. Ela foi medicada com imiquimode creme a 5% em aplicações rotineiras por oito semanas consecutivas para evitar recorrências e foi também vacinada contra o HPV após o procedimento. **Conclusão:** Exérese cirúrgica é o tratamento de escolha em lesões condilomatosas extensas para excluir malignidade. O uso de Imiquimode como terapia adjuvante para redução de recidivas mostrou-se adequado.

Palavras-chave: infecções por Papilomavirus; imiquimode; condiloma acuminado.

INTRODUCTION

Giant condylomata acuminata, also known as Buschke-Lowenstein tumor, is a rare form of tumor of the anogenital condylomata acuminata⁽¹⁾, which is a sexually transmitted infection (STI) caused by the human papillomavirus (HPV). Approximately 40 of known HPV have tropism for the anogenital site, and giant condylomata is associated with infection by HPV 6 and 11⁽²⁾. It is characterized by an extensive exophytic benign warty lesion

with the potential for malignancy and local aggressive behavior⁽¹⁾. Several therapeutic possibilities have been reported for the management of the giant condylomata acuminata, with variable outcomes. Surgical local excision is the treatment of choice in most hospital services, alone or in association with other treatment options like radiation therapy, topical and intralesional chemotherapy, systemic interferon α -2b, carbon dioxide laser, and topical therapies including 5% imiquimod that can reduce recurrence, podophyllin and therapeutic vaccine, which is currently under research⁽²⁾. Although several warts are considered benign, a long-lasting genital lesion can turn malignant due to contact between the virus and the immunologic system. Thus, the time to remove the giant condylomata acuminata to prevent a carcinomatous transition needs to be prompt.

OBJECTIVE

This study aimed to report a giant condylomata acuminata in an immunocompetent patient and to describe the therapeutic management.

¹Infectious Diseases Post-Graduate Program, Universidade Federal do Espírito Santo – Vitória (ES), Brazil.

²Gynecology and Obstetrics Residency Program, Universidade Federal do Espírito Santo – Vitória (ES), Brazil.

³Gynecology and Obstetrics Residency Program, UNIMED Vitória – Vitória (ES), Brazil.

⁴Gynecology and Obstetrics Department, Universidade Federal do Espírito Santo – Vitória (ES), Brazil.

⁵Universidade Veiga de Almeida – Rio de Janeiro (RJ), Brazil.

⁶School of Sciences of the Santa Casa de Misericórdia de Vitória (EMES-CAM), Santa Casa de Misericórdia de Vitória Hospital – Vitória (ES), Brazil.

CASE REPORT

A 21-year-old female patient, married for about six months, farmer, with incomplete high school, and no condom use in oral and vaginal sexual intercourse was referred to the Outpatient Clinic for Sexually Transmitted Infections and AIDS at a public hospital in the city of Vitória, Espírito Santo State, Brazil, reporting onset of progressive growth verrucous lesions on the external genitalia for four months. She was treated with benzathine penicillin and oral metronidazole previously and denied smoking, drinking, or drug use. The tumor was painful and bleeding due to secondary bacterial infection. Physical examination revealed bilateral coalescent verrucous lesion occupying the whole extension of labia majora and minora as well as perianal lesions clinically compatible with Buschke-Lowenstein giant genital condylomata (**Figure 1**).

Cervical examination was unchanged, and cervical and vaginal cytology, colposcopy, and otolaryngologic examination were unchanged; moreover, serological tests for HIV, viral hepatitis, and syphilis presented no abnormalities. The sexual partner underwent serological tests that were unchanged, and genital inspection did not present condylomata lesions. Hospitalization was indicated, and gentamicin was administered for two weeks. The patient underwent a surgical ablation, and giant condylomata diagnostic confirmation was obtained through histopathology, which showed hyperkeratosis and papillomatosis with multiple koilocytes, with fast mitotic activity and no cellular atypia, suggestive of HPV infection (**Figure 2**).

HPV 11 was identified by the PCR test. After surgery, in a 30-day follow-up consultation, she presented persistent perianal lesions (**Figure 3**). The patient was submitted to 70% trichloroacetic acid application in the perianal lesions for seven weeks, with resolution of the condition. She underwent the use of 5% imiquimod cream in routine applications for eight consecutive weeks to avoid recurrence (**Figure 4**) and was vaccinated for HPV after the procedure. On her three-year follow-up, she remained disease-free, having periodic consultations, using a barrier method to prevent new STI and without any recurrence.

The study project was submitted to the Ethical Committee for Research of the Federal University of Espírito Santo.

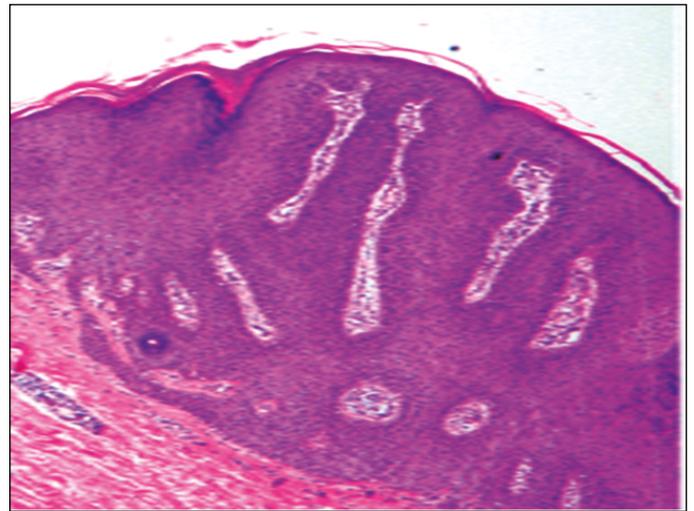


Figure 2 – Histopathological findings showing hyperkeratosis and papillomatosis with multiple koilocytes, consistent with HPV infection (hematoxylin and eosin staining, ×10).



Figure 3 – Persistent perianal lesion after vulvar electrosurgical resection.



Figure 1 – Giant condylomata acuminata of the vulva. Large, irregular, ulcerative cauliflower-like tumor, covering the vulvar and perianal area.



Figure 4 – Patient's vulva, six months after surgery. Complete resolution of the genital condylomata.

DISCUSSION

Giant condylomata acuminata is a very rare clinical condition⁽¹⁾. Currently, surgery can be avoided in some patients due to developed topical therapeutic methods⁽³⁾. Conversely, surgical excision remains the standard therapy in cases of high-risk condylomata acuminata or if topical therapy appears unworkable due to the size of the affected lesion^(3,4). Here, a case of a rapid-growth HPV lesion in a female patient was reported, who was very embarrassed about her condition and lived in a difficult access region. The condition, HPV 11, was identified by PCR test, in concordance with literature reviews^(2,3). The patient was evaluated for STI and cervical cancer prevention due to its HPV association, as cytological screening to detect precursor lesions is still paramount in some Brazilian regions⁽⁵⁾. She underwent high-frequency surgical excision, which is indicated for extensive condylomata lesions due to its advantages in controlling hemostasis, resolution rates in 90% of cases, and recurrence of about 25%⁽²⁻⁴⁾. Moreover, surgical ablation is the first option to exclude malignancy and to avoid the development of giant condilomata^(4,6). Recurrences may occur in 25 to 66% of cases after surgical treatment, according to some authors^(3,7), which are avoided by use of imiquimod after surgery in regular applications for eight consecutive weeks as well as by HPV vaccination. HPV vaccines have been known for their protecting results on cervical cancer and genital warts, though the treatment outcome is still indefinite. Therapeutic vaccine for HPV aims to generate cell-mediated immunity and studies on the subject are in progress^(8,9). Currently, a prospective study suggested that HPV vaccines could be effective in the management of genital warts⁽⁹⁾.

Imiquimod, an immune response modulator, has also been used, in regular applications, as an alternative therapy in HPV lesions by inducing the production of interferon alfa and cytokines, enhancing the immune response against HPV infected cells^(3,10).

Therefore, the association of surgical techniques and topical 5% imiquimod therapy was successful in this case report, highlighting that the controlling needs to be individualized.

CONCLUSION

Surgery excision is the treatment of choice in extensive genital condylomata lesions and should be readily instituted to exclude malignancy. Imiquimod use as adjuvant therapy for reduced recurrence seems to be appropriate, as in the present case.

Participation of each author

Helena Lucia Barroso dos Reis, Antônio Chambo Filho, and Neide Aparecida Tosato Boldrini conceived the study, collected data, and analyzed and interpreted clinical data. Antônio Chambo Filho, Helena Lucia Barroso dos Reis, and Neide Aparecida Tosato Boldrini attended to the patient. João Victor Jacomele Caldas, Carolina Azevedo Feltz, Danielle de Oliveira Machado, and Lucas Donateli Rosa performed the systematic review. Dennis de Carvalho Ferreira and Marize de Freitas Santos Neves performed laboratorial studies. Helena Lucia Barroso dos Reis and Antônio Chambo Filho developed the first draft. All authors approved the subsequent draft versions. All authors approved the final submitted version.

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Conflict of interests

The authors declare no conflict of interests.

Ethical approval

The study was approved by the Ethics Committee of the Universidade Federal do Espírito Santo and informed consent was waived for this study.

REFERENCES

1. Sandoval I, Hernández R, Torres E, Yanque O. Giant condylomata acuminata of Buschke-Lowenstein. *J Obstet Gynaecol*. 2019;1-2. <https://doi.org/10.1080/01443615.2019.1607834>
2. Nadal SR, Manzione CR, Horta SHC, Calore EE. Sistematização do atendimento dos portadores de infecção perianal pelo papilomavirus humano (HPV). *Rev Bras Coloproct*. 2004;24(4):322-8.
3. Spinu D, Rădulescu A, Bratu O, Checheriță IA, Ranetti AE, Mischianu D. Giant condyloma acuminatum - Buschke-Lowenstein disease – a literature review. *Chirurgia (Bucur)*. 2014;109(4):445-50.
4. Koukoura O, Klados G, Strataki M, Daponte A. A rapidly growing vulvar condylomata acuminatum in a young patient. *BMJ Case Rep*. 2015;2015. <https://doi.org/10.1136/bcr-2014-208126>
5. Boldrini NT, Freitas LB, Coutinho AR, Loureiro FZ, Spano LC, Miranda AE. High-grade cervical lesions among women attending a reference clinic in Brazil: associated factors and comparison among screening methods. *PLoS One*. 2014;9(7):e102169. <https://doi.org/10.1371/journal.pone.0102169>
6. Chu QD, Vezeridis MP, Libbey NP, Wanebo HJ. Giant condyloma acuminatum (Buschke-Lowenstein tumor) of the anorectal and perianal regions: analysis of 42 cases. *Dis Colon Rectum*. 1994;37(9):950-7. <https://doi.org/10.1007/bf02052606>
7. Papiu HS, Duminici A, Olariu T, Onita M, Hornung E, Goldis D, et al. Perianal giant condylomata acuminatum (Buschke-Lowenstein tumor). Case report and review of literature. *Chirurgia (Bucur)*. 2011;106(4):535-9.
8. Yang A, Farmer E, Wu TC, Hung CF. Perspectives for therapeutic HPV vaccine development. *J Biomed Sci*. 2016;23(1):75. <https://doi.org/10.1186/s12929-016-0293-9>
9. Choi H. Can quadrivalent human papillomavirus prophylactic vaccine be an effective alternative for the therapeutic management of genital warts? An exploratory study. *Int Braz J Urol*. 2019;45(2):361-8. <https://doi.org/10.1590/S1677-5538.IBJU.2018.0355>
10. Passos MRL, editor. DST, Doenças Sexualmente Transmissíveis. 5ª ed. Rio de Janeiro: Cultura Médica; 2006.

Address for correspondence:

HELENA LUCIA BARROSO DOS REIS

Ambulatório de Ginecologia e Obstetrícia, Universidade Federal do Espírito Santo

Avenida Marechal Campos, 1468 – Maruípe

Vitória (ES), Brazil

CEP: 29043-260

E-mail: dr.hbarroso@gmail.com

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