

Case report: Buschke-Lowenstein tumor, a giant anal condyloma acuminata

Reporte de caso: tumor de Buschke-Lowenstein, un condiloma acuminado gigante anal

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Abstract

24-year-old man with positive HIV, with a giant exofitic anal condyloma, with a clinical presentation of a painfull suppurative anal condyloma with a pathology report of an in situ squamous cell carcinoma. The purpose of the investigation is a case report and the procedure was observational. The finding was a Buschke-Lowenstein tumor.

Keywords: Buschke-Lowenstein tumor. Papillomavirus. Condyloma acuminata.

Resumen

Varón de 24 años, con infección por el virus de la inmunodeficiencia humana, que presenta una tumoración exofítica, dolorosa y supurativa, con reporte positivo de virus de papiloma humano y reporte histopatológico de carcinoma espinocelular sin evidencia de diseminación (in situ). El propósito de la investigación es un reporte de caso y el procedimientos fue observacional. El hallazgo fue un tumor de Buschke-Lowenstein.

Palabras clave: Tumor de Buschke-Lowenstein. Virus del papiloma humano. Condiloma acuminado.

Introduction

Giant condyloma acuminatum, or Buschke-Lowenstein tumor, is considered a rare presentation of human papillomavirus (HPV) infection, characterized by a large, slow-growing, exophytic, cauliflower-like verrucous lesion, primarily in immunosuppressed patients¹.

Initially described by Buschke in 1896 and later by Lowenstein in 1925, cases have been reported in various anatomical locations such as the mouth, penis, scrotum, vulva, vagina, perianal area, and anorectal region. It has a higher incidence in men vs women (3:1)².

The tumor has been associated with HPV types 6 and 11, which are recognized as low-risk oncogenic due to their minimal malignancy potential. However, there is a possibility of co-infection with high-risk types, especially 16 and 18, which have evidence of oncogenesis and development of anorectal cancer³.

Currently, there are several available treatment options for this tumor presentation, mainly due to its proximity to important structures and its biological behavior, which is not fully understood. Most authors recommend early disease control through radical excision and, if necessary, abdominoperineal resection in

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cases of recurrence, pelvic invasion, or malignant transformation⁴.

Case report

A 24-year-old male, recently diagnosed with human immunodeficiency virus (HIV) and on antiretroviral treatment, began experiencing symptoms 13 months prior to consultation, including progressive volume increase in the perianal region, which was painless, firm, and immobile. One month before admission, he reported exacerbation with difficulty walking, defecating, and sitting, along with pain, bleeding, and discharge through the lesion, leading him to seek medical consultation. Upon initial assessment, the patient was hemodynamically stable, with an ectomorphic build, and had a cauliflower-like verrucous tumor in the perianal region, approximately 12 cm in horizontal diameter and 8 cm in vertical diameter, with purulent, fetid discharge (Fig. 1). Laboratory tests were requested and reported within normal ranges; viral load was undetectable. An outpatient surgical resection of the lesion along with anoscopy was planned. As part of the protocol due to the COVID-19 pandemic, a polymerase chain reaction (PCR) test for SARS-CoV-2 was requested, which turned out negative. The procedure was performed under epidural block, with complete resection of the lesion, leaving resection margins of 1.5 cm to the periphery and 1 cm in depth (Fig. 2). A specimen weighing approximately 600 g was obtained (Fig. 3) and sent for pathological examination. The patient was admitted to the general surgery ward for ongoing monitoring.

Analgesics and antibiotics were started, and wet dressings were applied to the wound frequently for 4 hours. The patient was discharged with follow-up by the general surgery clinic. One week later, the surgical wound was in the granulation process with no satellite verrucous lesions, and the patient reported an improvement in quality of life.

The histopathological report was superficial squamous cell carcinoma (in situ).

Discussion

Condyloma acuminatum is the most widespread viral sexually transmitted disease worldwide. It is associated with HPV types 6 and 11, which are highly contagious and transmitted predominantly through anogenital and oral sexual contact. This phenomenon is often attributed to early sexual initiation and a high



Figure 1. Physical examination of exophytic tumor located in the perianal region.



Figure 2. Postoperative image following complete resection of the exophytic perianal tumor.



Figure 3. Specimen from the resection of the exophytic perianal tumor.

number of sexual partners. While most cases regress spontaneously, a small percentage of individuals experience long-term persistence of warts, influenced by risk factors such as immunosuppression, age, and co-infection with other high-risk HPV types (especially 16 and 18). This phenomenon could be considered a precursor to more aggressive lesions, such as giant condyloma acuminatum or Buschke-Lowenstein tumor⁵.

Buschke-Lowenstein tumor is considered by some authors as a benign lesion with carcinomatous features, while others view it as an intermediate condition between condyloma acuminatum and squamous cell carcinoma, presenting a high rate of recurrence (66%), a high rate of malignant transformation (56%), and a 20% mortality rate⁵.

Typically, the malignant transformation of this giant condyloma results in a verrucous carcinoma, which is a well-differentiated, low-grade variant of squamous cell carcinoma. Although it appears benign histologically, with minimal atypia and few mitotic cells, it behaves aggressively and destructively on a locoregional basis. It rarely presents metastases to regional or distant lymph nodes. Most cases are not recognized as malignant due to the absence of epithelial dysplasia

and stromal invasion in early stages⁶. Our patient presented with a malignant tumor diagnosed histologically as squamous cell carcinoma. The malignant transformation rate reaches 20% in condyloma acuminatum and up to 56% in Buschke-Lowenstein tumors⁷.

Clinical management should be preceded by a comprehensive clinical and pathological analysis to determine the extent and degree of tumor invasion⁸.

In isolated cases, various treatment modalities have been used. In a report of 42 cases, Chu et al.⁹ suggest surgical excision of the tumor with wide margins, with or without adjuvant chemotherapy is the gold standard for Buschke-Lowenstein tumors.

Subsequent treatment with radiotherapy, immunotherapy, antiviral therapy, or chemotherapy should be individualized for each patient, depending on tumor extent and histopathological report.

The treatment administered in our case was initially surgical, and to date, at the last follow-up consultation, there is no clinical evidence of tumor recurrence¹⁰.

Conclusions

Buschke-Lowenstein tumor has a high rate of recurrence and malignant transformation, leading to the development of squamous cell carcinoma. Pre-treatment clinical and pathological diagnosis is essential for selecting the appropriate therapy. Wide-margin surgery, with or without other treatment modalities, is effective for controlling the disease. Long-term follow-up is necessary for cases of recurrent condylomatosis resistant to conventional treatments or with evidence of clinical and histological recurrence.

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Conflicts of interest

None declared.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

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