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Buschke-Lowenstein Tumor and its Medical-Surgical Approach

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ABSTRACT

Buschke-Lowenstein tumor is a benign lesion of the skin and mucosa that occurs most commonly in the genital and perianal region of sexually active men and women. It is associated with human papillomavirus (HPV) and is treated with surgery in most cases. In addition, patients with immunodeficiency have a higher incidence of TBL. The initial clinical evaluation should include a detailed history, a careful physical examination, and an assessment of risk factors, including sexual activity, immunosuppression, and HPV exposure.

The diagnosis of TBL is based on clinical presentation, histopathology and HPV detection. Histopathologic examination is necessary to confirm the diagnosis of TBL and to rule out other similar conditions. In addition, HPV detection is important to establish the risk of progression to malignant lesions and guide the management of TBL.

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INTRODUCTION

Buschke-Lowenstein tumor, also known as giant condyloma, is a benign neoplasm of the skin and mucosa that can have a significant impact on the quality of life of affected patients. It is a rare, slow-growing, highly vascularized tumor characterized by the appearance of a large, exophytic, wart-like lesion with a papillomatous surface.1

EPIDEMIOLOGY

TBL is a rare lesion, but its prevalence varies according to the population and country studied. In general, TBL is considered to account for less than 1% of all skin and mucosal lesions, and its annual incidence is estimated at 1-5 cases per 100,000 population.2

TBL is more common in sexually active individuals and has been reported more frequently in men than in women. The age of presentation varies widely, but most cases are diagnosed in people between 20 and 40 years of age.3

HPV infection is a major risk factor for the development of TBL, and high-risk HPV genotypes, especially 16 and 18, have been shown to be associated with an increased risk of TBL. An HPV co-infection rate in patients with TBL of up to 90% has been reported, suggesting a causal relationship between HPV and TBL.4

TBL is also associated with other risk factors, such as smoking, immunosuppression, diabetes, obesity, and poor intimate hygiene. TBL has been reported to be more common in HIV patients, transplant recipients, and patients with other immunosuppressive diseases.5

In terms of geographic distribution, TBL has been reported worldwide, but its prevalence varies according to the region and country studied. A higher incidence of TBL has been reported in low-income countries and in areas with unfavorable socioeconomic conditions, where lack of intimate hygiene education and lack of access to adequate medical care may contribute to the development of the disease.6

CLINICAL MANIFESTATIONS

Buschke-Lowenstein tumor presents as a large, exophytic, wart-like lesion with a papillomatous surface, which can vary in size from a few millimeters to several centimeters. The lesion is usually painless, but may cause discomfort or pain if

located in areas of friction or trauma. The most common location is in the anogenital region, although it can also appear in other areas, such as the soles of the feet, hands, mouth and larynx.The lesion may be asymptomatic or cause discomfort, pain, itching, bleeding and discharge.7

DIAGNOSIS

The diagnosis of Buschke-Lowenstein tumor is based on clinical evaluation of the lesion and biopsy to confirm the histologic diagnosis. Clinical evaluation should include careful inspection of the affected areas, including the anogenital region and mucosa. In most cases, the lesion presents as a warty mass with a papillomatous surface, but in some cases it may be confused with other lesions, such as common warts, condylomata acuminata or squamous cell carcinomas. Therefore, an incisional or excisional biopsy is recommended to confirm the diagnosis and rule out the presence of malignancy. On biopsy, hyperplasia of epithelial cells is seen, with leafy and bulbous papillae, extending into the dermis and subcutaneous tissue, accompanied by chronic inflammation.8

MEDICAL TREATMENT

Treatment of Buschke-Lowenstein tumor is difficult due to its size and location in sensitive and difficult to access areas. Medical treatment includes topical application of chemotherapeutic agents, such as podophyllin, 5-fluorouracil or imiquimod, or intralesional injection of bleomycin or interferon. 9

Surgical techniques, such as wide excision or electrosurgery, can also be used, although these techniques can be invasive and leave significant scarring. In some cases, combination therapies have been used to increase the efficacy of treatment.9,10

Surgical treatment of Buschke-Lowenstein tumor is reserved for those cases in which the lesion is very large, infiltrative or unresponsive to medical treatment. The goal of surgery is to completely remove the tumor while preserving the function and esthetics of the affected region.10

There are different surgical techniques for the treatment of Buschke-Lowenstein tumor, depending on the location and extent of the lesion. Some of the options are:

Wide excision: this technique consists of complete removal of the tumor with a safety margin of healthy tissue, which allows for a thorough histopathological evaluation to rule out the presence of residual tumor cells. This technique is used in small to moderate lesions, which do not involve deep structures and do not require reconstruction.10

Laser surgery: This technique uses a carbon dioxide (CO2) laser to vaporize the tumor, allowing precise resection and less loss of healthy tissue. Laser surgery is a less invasive technique and can be useful in superficial or small lesions.10

Mohs micrographic surgery: This technique is used in large or aggressive lesions, involving deep structures or requiring complex reconstruction. Mohs micrographic surgery involves the removal of the tumor in layers, with immediate histologic evaluation of each layer to determine the exact extent of the tumor and to prevent recurrence.11

Colostomy: in very advanced or aggressive cases, where the tumor affects the rectum and perianal region, a colostomy may be necessary, which involves the creation of a stoma to divert stool and avoid contamination of the surgical wound.12

It is important to note that surgical treatment of Buschke-Lowenstein tumor can be complex and associated with an increased risk of complications, such as wound infection, dehiscence, bleeding, or sexual or anal dysfunction. Therefore, it is recommended that this type of surgery be performed by an experienced team and in a specialized center. In addition, postoperative follow-up should be rigorous, with regular check-ups to detect possible recurrences or late complications.12

CONCLUSIONS

Buschke-Lowenstein tumor is a rare benign neoplasm that can have a significant impact on the quality of life of affected patients. Early diagnosis and timely treatment are essential to prevent complications and reduce the morbidity associated with this disease. Treatment should be individualized and tailored to the characteristics of each patient, taking into account the location, size and extent of the tumor.

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