

Bowenoid Papulosis of the Genitalia in an Older Individual: A Case Report

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Abstract

Bowenoid papulosis (BP) is an uncommon condition caused by human papillomavirus, presenting as an asymptomatic lesion on the anogenital region. We report a case of BP in a 63-year-old male, an unusual demographic for this condition. Clinically, BP lesions resemble viral warts. Although BP has a low risk of progression to invasive squamous cell carcinoma (SCC), prompt diagnosis and management are crucial to prevent malignant transformation. Treatment options include topical therapies, laser therapy, and surgical excision. This case highlights the importance of recognizing BP and implementing appropriate management strategies, especially in atypical age groups and individuals with predisposing factors.

Keywords: Bowenoid papulosis, human papillomavirus, sexually transmitted disease

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INTRODUCTION

Bowenoid papulosis (BP) is a sexually transmitted disease (STD) intensely associated with human papillomavirus (HPV).^[1,2] This condition typically affects young, sexually active individuals and is considered a low-grade *in situ* squamous cell carcinoma.^[3,4] Clinically, it closely resembles genital warts.^[5] BP presents asymptomatic solitary or multiple papules of varying sizes, ranging from pink to dark brown. In males, the lesions are predominantly found on the penile shaft and scrotum, while in females, they primarily affect the labia minora, labia majora, and clitoris.^[6-8] Treatment modalities include topical creams, laser therapy, cryotherapy, electrocautery, photodynamic therapy, and surgical excision of the lesions.^[9,10] In this study, we report a case of papulosis in the genital region that was successfully treated with surgical intervention.

CASE REPORT

A 63-year-old male who suffered a stroke three years ago and is currently bedridden presented with complaints of progressive growth of asymptomatic lesions over the penis, scrotum, and suprapubic area for the past year [Figure 1]. Multiple hyperpigmented papules with well-defined borders and varying colors from pink to dark brown were observed during the skin examination. These papules had coalesced in some areas to form large plaques. The lesions were painless, nonbleeding, and nonexudative. The patient also reported a history of recurrent verrucous lesions over the penis and suprapubic regions four years ago, which had been treated completely with cryotherapy. He denied symptoms of irritative or obstructive lower urinary tract symptoms (LUTS) and recent weight loss but mentioned a history of opium use for the past 15 years.

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A skin biopsy was performed on the lesions, and histopathological examination revealed parakeratosis, mild hyperkeratosis, irregular acanthosis, and atypia throughout the full thickness of the epidermis [Figure 2], crowding, and an irregular arrangement of nuclei, many of which are large, hyperchromatic, and pleomorphic. Dyskeratosis, abundant mitosis including atypical features, and multinucleated keratinocytes are also present. In addition, some koilocytes (HPV cytopathic effects) are seen [Figure 3]. These dysplastic features did not extend beyond the basement membrane. Based on the histopathological findings and clinical features, the patient was diagnosed with BP. He underwent surgical excision of the lesions with a 5 mm margin around them, completely removing them from the roots and subcutaneous tissue. Three days later, the patient was discharged in good general condition. He underwent a 3-month follow-up, and no recurrences were observed.

DISCUSSION

BP is an intraepithelial neoplasm considered a precancerous lesion and is first described by Kopf and Bart.^[10,11] It is primarily associated with HPV 16 and often occurs in the third and fourth decades of life.^[7] In most studies, including the study by Shastry and Betkerur,^[10] patients affected by this condition fall within this age range. However, our case study involves a 63-year-old individual diagnosed with this disease. Clinically, the lesions typically present as pigmented elevated papules or plaques from a few millimeters to several centimeters with a smooth or papillomatous surface.^[8,10] The lesions are predominantly located in the penis, vulva, and perianal area.^[5,12] In our case, papules in the penile shaft and scrotum merged to form an elevated plaque. The main differential diagnosis of BP is condyloma acuminatum clinically, but histopathologically, it resembles Bowen's disease. Distinguishing between BP and Bowen's disease is not solely based on histological features and clinical characteristics such as the location and morphology of the lesions, which can aid in differentiation.^[6,7] In our patient, the lesions appeared similar to genital warts initially, but after a biopsy and examination of histopathological features alongside clinical characteristics, the diagnosis of BP was confirmed. Histopathologically, in BP, atypical mitoses increase. Acanthosis, atypia throughout the epidermal thickness, multinucleated keratinocytes, pleomorphism, and hyperkeratosis are observed, while the basement membrane remains intact.^[13,14] In this study, in the biopsy sample obtained from the lesions, in addition to the mentioned changes, koilocytic cells were observed, indicating HPV-infected epithelial cells. BP follows a variable course over time. In some cases, lesions may regress spontaneously. Occasionally, lesions persist for years, especially in immunocompromised individuals and may progress to invasive SCC. However, the risk of progression from BP to invasive SCC is very low, at less than one percent.^[5,10] The goal of treatment is to prevent malignant transformation and preserve tissue. Various



Figure 1: Lesions over the penis, scrotum, and suprapubic area

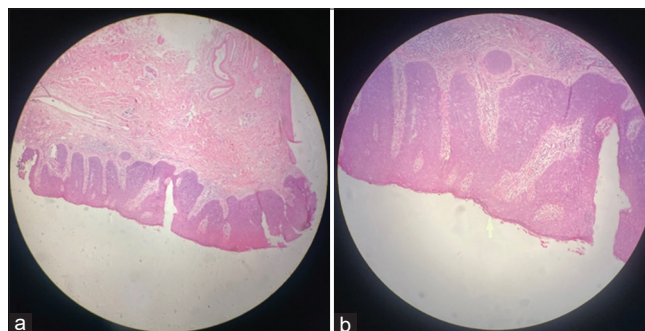


Figure 2: Histopathological examination of the lesions with hematoxylin and eosin staining showing acanthosis with loss of polarity and maturation in the full thickness of squamous epithelium a (x4 magnification) and b (x10 magnification)

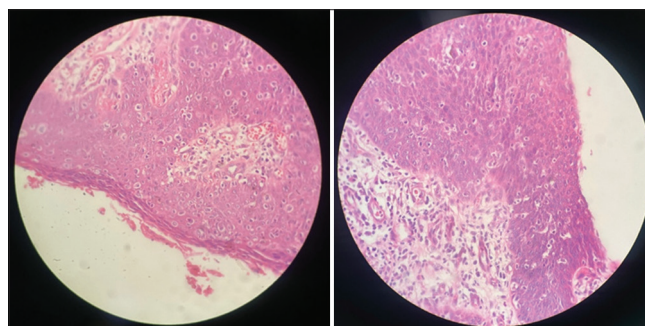


Figure 3: Histopathological examination of the lesions with hematoxylin and eosin staining showing koilocytes and squamous cells with hyperchromatic nuclei and marked pleomorphism (x40 magnification)

treatment modalities exist for BP, including locally destructive or ablative methods such as cryotherapy, CO₂ laser therapy, photodynamic therapy, topical agents like 5-fluorouracil and imiquimod, and surgical excision.^[7,13] Additionally, based on studies, including the study by Baldwin *et al.*,^[15] strengthening immune responses through vaccination can be effective against intraepithelial neoplasia. In our case study, due to the resistant nature of the lesions and their association with HPV, surgical

excision was performed to prevent progression to invasive SCC, resulting in complete removal of the lesions.

CONCLUSION

In conclusion, BP is important to recognize due to its association with HPV and its potential for malignant transformation. This case emphasizes the need for thorough evaluation and appropriate intervention in atypical presentations of genital lesions.

Author contributions

All authors contributed equally.

Declaration of patient consent

Written informed consent was obtained from the patient to publish his case.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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