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Giant Condyloma Acuminatum: A Surgical Riddle

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Abstract

Giant condyloma acuminatum (GCA) commonly known as Buschke-Lowenstein tumor (BLT) is a rare sexually transmitted disease, which is always preceded by condyloma accuminata and linked to human papillomavirus (HPV). Most commonly affected sites are male and female genitalia, anal and perianal regions. Giant condyloma acuminatum is well-known as slow growing but locally destructive with a high rate of recurrence and increased frequency of malignant transformation. Surgical management is considered to be the best among all the options.

Keywords: Buschke-Lowenstein Tumor, Giant Condyloma Acuminatum

1. Introduction

Anogenital warty lesions thought to be caused by various different types of HPV are very common and treated conservatively; however, giant condyloma accuminatum is very rare and challenging to deal with. Human papillomavirus types 6 and 11 have been consistently found to be associated with these lesions (1). Buschke-Lowenstein tumor or giant condyloma acuminatum has an indolent course but has been known for its local destruction with penetration into the underlying dermal structures. It is also known for its high rates of relapse after conservative or surgical treatment and high rates of transformation into malignancy.

Most commonly affected sites are male or female genitalia, anal and perianal regions. Various different modalities are used for the management of giant condyloma acuminatum like topical chemotherapy, immunotherapy, photodynamic therapy, radiotherapy and radical surgery; however, there is no consensus regarding the best modality due to scarcity of cases. We here present a rare case of giant condyloma acuminatum evolving since last 22 years managed successfully with wide surgical excision followed by primary closure.

2. Case Presentation

A young 49-year-old chronic smoker heterosexual gentleman presented to our surgery outpatient department with a history of mass protruding from the anal region evolving since last 22 years. The mass was initially small, which has gradually enlarged in size enormously hampering day to day activity, causing pain while defecation, foul smell due to improper cleaning, discomfort while walking and sitting. Physical examination revealed a circumferential warty exophytic cauliflower like growth measuring 15cm in vertical dimension and 8cm in the transverse dimension covering the anus completely and extending up to the base of scrotum (Figure 1).

Digital rectal examination was painful and complete assessment was not possible. There was no history of high risk behavior or any other associated comorbid conditions.

In the laboratory investigations leucocyte count was normal, patient was not positive for HIV, hepatitis B and C, syphilis and HPV virus. MRI scan revealed that the warty growth involved the anal canal without extending into the anal sphincter. Patient was prepared for surgery and wide excision of the warty growth involving 0.5 cm of the anal canal with adequate margin was performed. The surgical defect created after the surgery was closed primarily (Figure 2).

Patient recovered well with full control of defecation and doing well nine months postsurgery.

3. Discussion

More than a century ago, in 1896, Abraham Buschke described two lesions of the penis as invasive condylomata

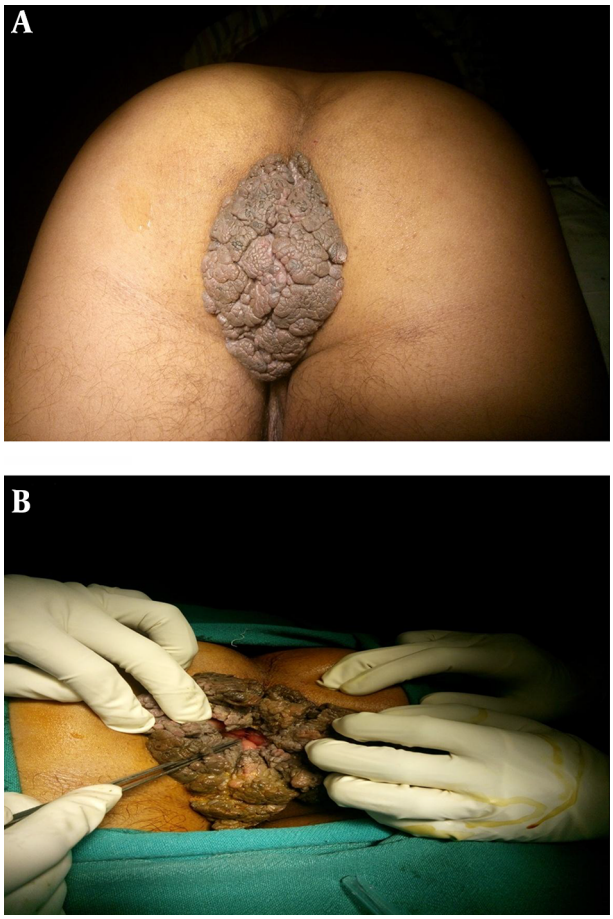

Figure 1. A, Giant Perianal Condyloma Acuminatum; B, Anal Canal

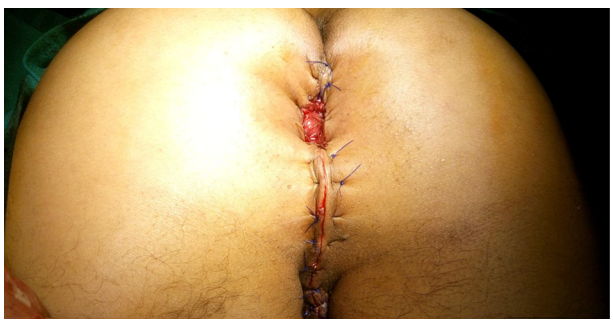

Figure 2. Primary Closure Following Wide Excision

and Ludwig Lowenstein in 1925 delineated the similar lesions of the anus (2). Dawson et al. were the first to describe giant anorectal condyloma acuminatum in 1965 (3). Further in 1979, Mohs and Sahls encompassed these lesions into the category of verrucous carcinoma (4). The incidence of the giant condyloma acuminatum in the literature is very rarely reported, probably 0.1% of the general population (5). Till the year 2012, literature reported 71 cases of perianal giant condyloma acuminatum (6). Usually the giant condyloma acuminatum seems to effect postpubertal generation with the male to female ratio of 2.7:1; however, few case in the pediatric age group have been reported (7).

Definitive association with the types of human papillomavirus, a double stranded DNA virus, is implicated these lessions and may be transmitted via sexual transmission, extragenital contact or vertical transmission. Multifarious risk factors associated with the giant condyloma acuminatum are smoking, chronic alcoholism, diabetes, local chronic inflammation and immunosuppression. Patients with immunosuppressive state like posttransplantation and a human immunodeficiency syndrome have preponderance towards high recurrence rates known as the Netherton syndrome (8). In immunosuppressed patients, involvement of the urethra and urinary bladder has also been observed.

Giant condyloma acuminatum appears to be benign on the histopathological examination; the characteristic features encompass exophytic growth with compact hyperkeratosis, intact basement membrane, extensive epidermal hyperplasia, vacuolated keratinocytes and a propensity towards invasion of the dermis. Carcinoma in situ or dysplasia is seen in conjunction with giant condyloma acuminatum. These tumors are well-known for its neoplastic transformation, which is noted in about 50% of the cases (9). Presence or absence of the malignant transformation in the giant tumors is not easy to ascertain as no distinct histological features are known, which differentiate condyloma acuminatum from squamous cell carcinoma (10). Hematogenous or lymphatic spread and metastasis to distant organs is not seen in these tumors.

The most frequent site of involvement is penis in males and vulva in females seen in 80% to 90% of the patients followed by anorectal region in 10% to 17% of the cases. Involvement of the anorectal region is more in males as compared to the females (11). Clinically anorectal lesions present as mass in the perianal region mostly, which is slow to evolve, exophytic, cauliflower like, ulcerative and invades the surrounding tissue. The local destruction can lead to pain, perianal abscess, fistulas and bleeding. Invasive carcinoma is frequently seen in giant condyloma acuminatum, which is present in half of the cases whereas dysplasia or carcinoma in situ is present in eight percent and rest of the cases have no evidence of invasion (9, 12).

Plethora of management options ranging from podophyllin, imiquimod, trichloroacetic acid, bichloracetic acid, 5-fluorouracil, cryotherapy, carbon dioxide

laser, photodynamic therapy, interferon, electrocautery, radiation and surgery with or without reconstruction are used to deal with giant condyloma acuminatum; however, there is no consensus regarding the best treatment due to scarcity of cases. Drawbacks of application of the topical therapy are pain, increased cost, long duration of treatment and increased risk of dose-related side effects in large tumors (7). Use of interferon is still in its budding stage and related to life-threatening risks and kept as a last resort9. Role of radiotherapy seems controversial as there are reports of transformation of these lesions to anaplastic or even invasive squamous cell carcinoma following radiotherapy (13).

Surgery with wide local excision and adequate margins seems to be the most feasible and rational approach. Surgery should be attempted by a surgeon well versed in the anatomy of the perianal region as it can lead to fecal incontinence or anal stenosis. Reconstructive procedures such as bilateral rotational S-flaps, V-Y flaps, musculocutaneous flaps, free flaps and superficial split skin grafting should be reserved for handling recurrences, which is as high as 50% (14). Patients with relapses, pelvic invasion, sphincter involvement or malignancy have to be subjected to abdominoperineal resection. Regular follow-up is obligatory as recurrence is quite high.

3.1. Conclusion

Perianal giant condyloma accuminatum known since almost a century is not very common and difficult to manage. It is well-known for its aggressiveness, local destruction, malignant transformation and high rate of relapses. Keeping in view the behavior of this rare sexually transmitted disease, a proper detailed evaluation and planning is of utmost importance in dealing with it effectively. There is no consensus regarding the best management due to scarcity of cases; however, wide surgical excision with adequate margins and primary closure of the defect if possible seems to be the best rational option whereas reserving reconstructive procedures for recurrences.

Footnote

Authors' Contribution: Ankit Shukla, Ramesh Bharti, Amar Verma, Rajesh Chaudhary and Rakesh B Anand have equally contributed substantially to the conception and design, acquisition of data, analysis and interpretation of data, drafting the article, critical revision of the article and final approval of the version to be published.

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