

Giant perianal condyloma acuminatum: Reconstruction with bilateral gluteal fasciocutaneous V-Y advancement flap

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ABSTRACT

Condyloma acuminatum caused by human papilloma virus is the most common sexually transmitted infection in the anogenital region. On the other hand, giant condyloma acuminatum that is also known as Buschke-Lowenstein tumor is a rare disease. Its primary treatment is surgical excision. The purpose of this report is to present a case that reached immense dimensions in the perianal region, and to emphasize the importance of wide surgical excision. A 17-year-old woman presented with a giant mass in the perianal region for 2 years, which progressively increased in size. Local examination revealed a large vegetative lesion in the perianal area. Wide surgical excision of the involved skin and lesion was undertaken. The wound was reconstructed by bilateral gluteal fasciocutaneous V-Y advancement flap. Response to various treatments is often poor, with a high recurrence rate. In conclusion, surgical treatment with wide excision and plastic reconstruction is an effective therapy for giant anal condylomas.

Keywords: Condyloma acuminatum, giant anal condyloma, perianal, surgical treatment

INTRODUCTION

Human papilloma virus (HPV) that causes skin warts and papillomas at the mucosal surfaces of the airways is also a factor for condyloma acuminatum in the anogenital region characterized by excessive epithelial growth. The incidence in the general population is 0.1%, and is the most common sexually transmitted disease of the anorectal region (1).

Giant condyloma acuminatum, which is also known as Buschke-Lowenstein tumor, is a large, slow-growing tumor of the anogenital region with a cauliflower appearance. Although histopathologically benign, clinically it exhibits malignant properties by creating pressure on surrounding tissue due to local growth, lack of spontaneous regression, and a high recurrence rate in spite of clinical treatment. Besides, it also has the potential to transform into squamous cell carcinoma (2).

The most effective treatment is complete surgical excision of the lesion. It is essential to achieve clear surgical margins and wide excision to prevent recurrence. Various rotation or advancement flaps can be used to repair the resultant large wound defects. Thus, the recovery time is shortened and the possibility of anal stricture is minimized (3).

Our goal was to emphasize the importance of surgical excision in the treatment of this disease by reporting a case of giant perianal condyloma acuminatum, which was treated with total surgical excision and V-Y advancement flap.

CASE PRESENTATION

A seventeen-year-old female patient presented with an anogenital lesion that gradually grew over the last 2 years. The patient had no history of any internal disease or medication that suppresses the immune system. On examination, a 15 x 8 cm in diameter, round, verrucous mass, vegetative in structure that circumferentially surrounded the anal region was observed. The lesion was consistent with giant condyloma acuminatum (Figure 1). There was no palpable locoregional lymph nodes. There was no evidence of invasion to suggest anal sphincter involvement. Other system examinations were normal. The patient's laboratory tests were within normal limits, and the ELISA (enzyme-linked immunosorbent assay) test for human immunodeficiency virus (HIV) was negative. Few verrucous lesions were observed in the anal canal on rectoscopy.

The perianal mass was totally excised with negative surgical margins, in lithotomy position under general anesthesia, after obtaining a written informed consent. The limited number of verrucous lesions seen in the anal canal was cauterized. A quite large perianal skin defect occurred after excision (Figure 2). After excision of the mass, the excised area was reconstructed with fascio-cutaneous VY advancement flap that was created from both gluteal regions adjacent to the wound (Figure 3). The patient

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did not require a stoma after surgery. Early postoperative fecal contamination of the operative field was attempted to be minimized with fiber diet and loperamide therapy. Despite these measures, there was partial dehiscence of the ano-cutaneous suture line on the 4th postoperative day, probably due to stretching of tissues during defecation. The wound was left for secondary healing with wound care and hot water baths. On the patient's postoperative first month evaluation, it was observed that the tissues have healed without anal incontinence or stenosis (Figure 4).

There was no evidence of invasion, dysplasia or malignant transformation on histopathological examination of the specimen. There is no evidence of recurrence in the fourth postoperative month.

DISCUSSION

Condylomas in the anorectal region are proliferative and high-grade squamous intraepithelial lesions that can present with

warts varying in size from pinpoint spots to giant masses. The causal factor in the development of these quite slowly progressive lesions is HPV from the papillomavirus family that is transmitted through sexual contact (2-4). In a study carried out by Pagliusi et al. (5) the worldwide prevalence of HPV infection has been reported to vary between 9-13%. HPV infection is the most common sexually transmitted disease (4, 5).

So far, more than 100 papillomavirus types have been identified. These etiological agents cause verrucous papilloma in certain anatomical regions. HPV types 6, 11, 16 and 18 typically cause condyloma in the anal region. Human papilloma virus types 6 and 11 are low-risk types and normally do not have malignant potential. They can be identified in benign condyloma acuminatum but are not present in anogenital cancer. Anogenital cancers usually carry the DNA of high-risk HPV types 16 and 18. These types are associated with severe dysplasia, carcinoma in situ and invasive carcinoma (5, 6). However, condyloma patients may become infected simultaneously with multiple HPV types including different oncogenic types (HPV 16, 18, 31, 33, 35, 39, 45). This situation is significantly associated with development of anogenital intraepithelial neoplasia and anogenital cancer (6).

Giant condyloma acuminatum in the form of a large, cauliflower-like, exophytic mass lesion in the perianal region is a rarely



Figure 1. View of the lesion on diagnosis



Figure 3. Reconstruction of the large wound defect with fasciocutaneous V-Y advancement flaps prepared from both gluteal regions



Figure 2. Wound defect after wide excision of the lesion



Figure 4. View of the operative field 1 month after the operation

encountered pathology in general surgery practice. Anogenital condylomata are known to be present in at least 0.5-1% of sexually active population aged 15-25 years. The incidence of perianal giant condyloma acuminatum in the general population is very low (0.1%) (1).

Only sporadic, single-center case reports have been published in the literature. Dawson reported the first case in 1965 (7). There are limited number of case reports in the literature on this topic. According to Trombetta et al. (6), 52 giant condyloma acuminata cases have been reported in the British literature until 2000. Herein, we report a case with giant perianal condyloma acuminatum.

Patients usually present with cauliflower-like lesions around the anus. Condyloma acuminatum is easily diagnosed with recognition of clinically obvious-looking lesions. It does not require any additional diagnostic evaluation. These lesions are confined to the squamous epithelium and transitional zone of the anal canal, and rectal extension of these lesions are extremely rare. Treatment of skin lesions alone should be avoided without adequate anoscopic examination. If the disease extends into the anal canal, any treatment directed for only the external component will fail. Therefore, evaluation of the internal anal canal should be done before starting treatment of perianal condylomata (1). In our case, except for a few verrucous lesions in the anal canal, the preoperative rectoscopy revealed no other findings. In our case with neither sphincter involvement nor deep tissue invasion, each verrucous lesion visualized during the operation was cauterized.

Perianal condyloma may transform into giant condylomata or squamous cell carcinoma if untreated. In addition, it can be transferred to a partner via sexual contact or to an infant during pregnancy. Therefore, it requires effective treatment. However, its treatment is challenging due to high recurrence rates.

There are no controlled studies in the literature on giant condyloma acuminata and therefore treatment algorithms cannot be produced. Approach to this disease is limited to various medical treatments or surgical excision. Non-surgical treatment options include topical or systemic chemotherapy (trichloroacetic acid, podophyllin, podophyllotoxin and 5-fluorouracil), topical and intralesional or systemic interferon therapy, immunomodulatory agents (imiquimod, interferon- α , interferon- β and interferon- γ) and radiotherapy. Interferon may be administered topically, intra-lesional or systemically. Interferon application directly into the tumor leads to eradication in 45-60% of patients, nonetheless with a high recurrence rate. The systemic use of interferon can be preferred when the lesion is very large and if surgical excision will provide worse results (6). Topical podophyllin application gives better results in ordinary condylomata, but is not recommended in giant condyloma acuminata since there is no data on this subject (7, 8). The role of immunotherapy (autologous vaccine) is still being evaluated for recurrence and for the treatment of large condylomata, despite promising results in limited case series (8).

The use of radiotherapy is still controversial due to lack of long-term results, the spread of new condylomas after application and anaplastic transformation (6, 7). The role of systemic chemotherapy is not well defined due to lack of data,

and the results of combined chemotherapy with 5-fluorouracil in the presence of giant condyloma is not promising (7). These methods can be used to reduce the recurrence rate due to insufficient tumor excision or to decrease tumor volume. However, despite the diversity of all these treatment methods, unfortunately these patients often develop recurrences in the long term (6-8).

The causes of relapse include re-infection from the same or different partner, virus reactivation after a long incubation period (period unknown), and failure of complete eradication of lesions harboring the virus with existing therapies. Under these conditions, unrecognized and untreated foci may lead to recurrences.

Wide excision with clear surgical margins was found to be the most effective treatment option in giant condyloma acuminata due to high recurrence rates (66%) and the possibility of malignant transformation (30-56%) (9).

Complete surgical excision of giant condyloma acuminata allows histopathologic examination of the complete specimen, thus revealing squamous cell carcinoma foci, if any. Radical surgical cure rate is reported as 61% (9). Surgery is the most effective treatment method that provides local control of the disease, including recurrence. There are two surgical options: wide local excision where the wound is allowed to heal by secondary intention, or reconstruction of defects using skin grafts or flaps (9, 10).

The experience reported in the literature comes from heterogeneous results from mainly case reports. Environmental rectal advancement flaps, house advancement flaps, S-plasty rotation flaps, V-Y advancement flaps are effective alternative methods in closure of large wound defects (8-10). In our case, bilateral gluteal fasciocutaneous V-Y advancement flaps were preferred for reconstruction of large perianal defects.

Reconstruction with large flaps that provide sufficient blood flow and meticulous hemostasis of the wound surface to prevent hematoma are both vital if an anoplasty is to be performed. It is important to avoid tension in the mucocutaneous anastomosis, but technically this is not always easy. As in our case, partial or complete dehiscence of the wound is not uncommon, but anal stenosis is rare (10). Most authors do not create a colostomy for fecal diversion and report acceptable rates of postoperative complications (8). Likewise, in our case, there was no need for colostomy. Despite the postoperative partial wound dehiscence, full recovery without complications was obtained with good wound care and early measures such as oral loperamide and low-fiber diet. The patient is recurrence free at the 4th postoperative month.

CONCLUSION

This article aimed to emphasize that anogenital giant condyloma acuminata are large lesions that are difficult to control with conservative and / or medical therapy methods, and that surgery is more effective in destruction of the lesions, improvement of quality of life and prevention of possible recurrences. In addition, as used in our case, various plastic reconstruction methods are defined to repair the very large wound defects created by surgical excision. Regardless of the wound closure

method applied, wound decomposition may occur. We believe that a good functional and cosmetic result can be obtained with suitable wound care without the need for an ostomy.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

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