*Case Report*

# Experience of Wide Local Excision of Perianal Giant Condyloma Acuminatum without Immediate Surgical Reconstruction: A Case Report

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Giant condyloma acuminatum or Buschke-Lowenstein tumor is characterized by its large size and is prone to infiltrating into underlying tissues although it is microscopically benign. It commonly affects the genitalia. Cases of perianal giant condyloma acuminatum are reported sporadically in English literature. In Taiwan, only two cases of perianal giant condyloma acuminatum was found in literature. We report a rare case of perianal giant condyloma acuminatum in a 62-year-old, non-homosexual, married man. There was a 6 × 6 × 4 cm fungating circum-anal mass extending into his scrotal area. In addition, more than two-thirds confluent anal condylomata were involved. He received wide local excision for the lesion. Pathology studies confirmed a diagnosis consistent with condyloma acuminatum. Four months later, his wound healed by secondary intention. After follow-up for one year and eight months, no anorectal recurrent condyloma has been found. The patient had no anal stenosis or incontinence.
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***Key Words***
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Buschke first described a giant condyloma acuminatum (GCA) on the penile foreskin in 1896. Buschke and Lowenstein further elaborated on this clinical entity in 1925.[1,2] GCA, synonymous with Buschke-Lowenstein tumor, is a variant of condyloma acuminatum, which appeared cytologically benign but behaved in a malignant manner with the risk of transformation to invasive squamous cell carcinoma.[3] GCA is characterized by its aggressiveness to underlying tissues; resistance to simple excision, local electrofulgaration or therapeutic agents; and high recurrence rate, despite the lesion having shown no histological criteria of malignancy.[4] The first case of GCA located in anorectal and perianal regions was reported by Dawson in 1965.[5] Chu and colleagues, analyzing 42 cases of GCA in anorectal and perianal regions, observed that the hallmark of the disease is the high rate of recurrence (66%), malignant transformation (56%), and no distant metastases.[6] Although rare, perianal GCA has been well documented. In a review article by Trombetta, fifty-two cases of perianal GCA were found prior to 2000.[7] The incidence of perianal GCA in Taiwan is not clear, but at least two cases were reported in literature prior to 2012.[2,8]

In a review article by Trombetta and associates, they concluded that local invasion and local recurrence are the major source of morbidity in this disease. Complete wide local excision is the preferred initial therapy when feasible.[7] However, there is debate over what to do with the large wound after wide local excision of the perianal GCA. Hemorrhoidectomy has been observed to carry a substantial risk for a later anal stenosis of 8-10%.[9-11] Moreover, anal stenosis was associated in 87% of patients with a previous hemorrhoidectomy.[12] As a result, immediate reconstruction strategies including bilateral rotational S flaps,[7,13-15] V-Y flaps, musculocutaneous rotational flaps, free flaps, skin grafting[9,16,17] were adopted with satisfactory outcomes. On the other hand, Klarisstenfield and colleagues analyzed 41 patients with perianal GCA and concluded that careful primary excision of even confluent warts can be safely performed without major primary flap reconstructions.[18] Here, we reported a patient with perianal GCA involving more than two-thirds confluent anal condylomata, who received wide local excision without immediate reconstruction, and was observed without development of anal stenosis.

## Case Report

A 62-year-old man presented with a giant cauliflower-like condyloma of the perianal region in August 2010. This lesion had been increasing slowly for a few months. Physical examination revealed a 6 × 6 × 4 cm fungating circum-anal mass extending into his scrotal area (Fig. 1). He had slight pain on digital rectal examination. No enlarged inguinal lymph nodes were palpated bilaterally. The patient was married and denied having any homosexual activity. The patient had no detectable immunological defects and had no symptoms of acquired immunodeficiency syndrome. Chest x-ray film revealed no suspected lesions. Routine admission laboratory results, including complete blood count, chemistry panel and a urine analysis, were within normal limits.

Under spinal anesthesia, wide local excision was performed, with a 1.5-cm free margin. More than two-thirds confluent anal condylomata were involved with the anal sphincters spared. Blood loss was minimal. The wound was left open for secondary healing (Fig. 2). Complete healing took about four months and no wound infection was observed.

Pathology studies confirmed a diagnosis consistent with condyloma acuminatum, showing free surgical margins. The section shows tissue with hyperkeratosis and parakeratosis of papillary squamous epi-

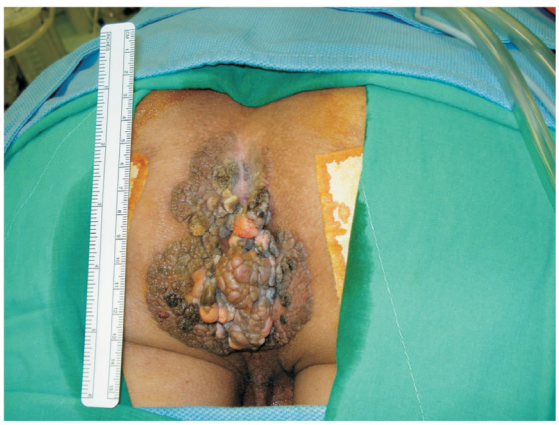

**Fig. 1.** Massive 6 × 6 × 4 cm exophytic, warty, gray-white, soft tumor of perianal region before treatment.

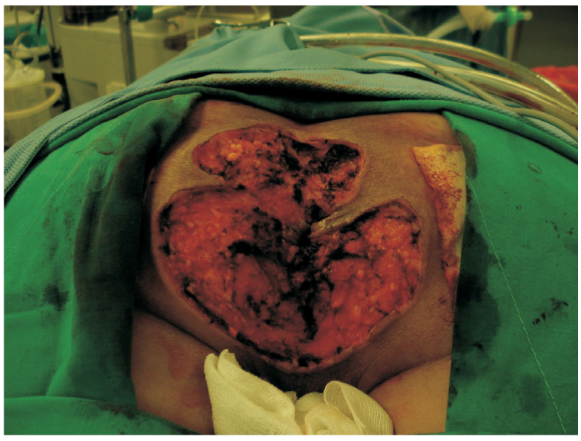

**Fig. 2.** Open wound immediately after wide local excision.

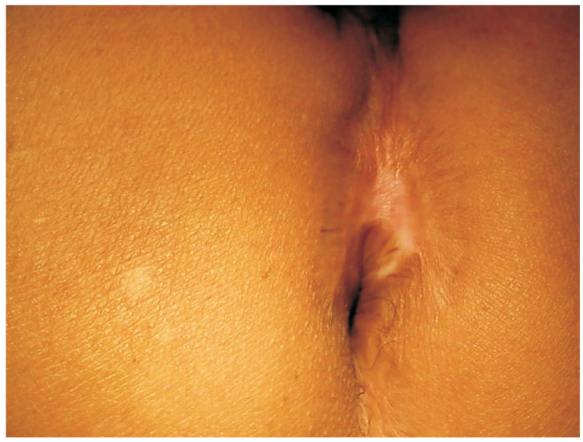

**Fig. 3.** Perianal area, secondary healing one year and eight months postoperatively.

thelium. There are koilocytes within the squamous epithelium with perinuclear halo and hyperchromatic nuclei.

No chemotherapy or radiotherapy was scheduled. No local wart recurrence occurred up to one year and six months after surgery. Most importantly, no anal stenosis developed (Fig. 3).

## Discussion

Great concern bas been expressed about the large wound caused by wide local excision of perianal GCA. Many methods have been described for treating skin defects after wide excision, including secondary healing, skin grafts, and S-plasty.[2] In a case reported by Chaidemenos and colleagues in 2006, excellent cosmetic results and shorter healing time of only four weeks were obtained with immediate mesh-skin grafting. As a result, Chaidemenos suggested this treatment option as first line treatment for GCA.[19] However, this requires more patient compliance to avoid fecal contamination. Moreover, many articles even recommend creating loop colostomy before wide surgical excision with immediate reconstruction, to avoid the risk of fecal contamination of the wounds.[15]

On the other hand, in Klaristenfeld's study, the author analyzed 41 patients with perianal GCA at their institution. Included patients were only patients with more than 50% confluent (range between 50% and 95%) anal condylomata. All patients underwent wide local excision and their wounds were kept open for secondary healing. During the follow-up period (mean 6.3 months), surprisingly, no anal stenosis was found. The author concluded that excision of extensive anal condylomata has a known high probability of recurrences, but the risk of developing anal stenosis is low. Careful primary excision of even confluent warts can therefore be safely performed without major primary flap reconstructions.[18] Due to our patient's poor compliance, our previous experience in this disease,[2] as well as Klaristenfeld's clinical experience,[18] we did not adopt the strategy of immediate skin grafting. Instead, we kept the patient's wound open for secondary healing.

It took four months for the patient's wound to heal. One year and eight months after surgery, no anal stenosis was observed, indicated by the ability to perform a digital rectal examination and a lack of functional outlet obstruction. In addition, no recurrence of perianal wart was noted.

## Conclusion

Given our experience in conjunction with previous literature, we recommend keeping the large wound open for secondary healing as the preferred treatment choice after wide local excision for perianal GCA. Larger controlled, prospective, multi-institutional studies with long follow-up will be needed to confirm these observations.

# References


1. Gersh I. Giant condylomata acuminata (carcinoma-like condylomata or Buschke-Loewenstein tumors) of the penis. *J Urol* 1953;69:164-72.
2. Huang SM, Leung WH, Chen BF. Malignant transformation of perianal giant condyloma acuminatum. *J Soc Colon Rectal Surgeon (Taiwan)* 2007;18:23-30.
3. Alexander RM, Kaminsky DB. Giant condyloma acuminatum (Buschke-Loewenstein tumor) of the anus: case report and review of the literature. *Dis Colon Rectum* 1979;22: 561-5.
4. Becker FT, Walder HJ, Larson DM. Giant condylomata acuminata. Buschke-Lowenstein tumor. *Arch Dermatol* 1969;100:184-6.
5. Dawson DF, Duckworth JK, Bernhardt H, Young JM. Giant condyloma and verrucous carcinoma of the genital area. *Arch Pathol* 1965;79:225-31.
6. Chu QD, Vezeridis MP, Libbey NP, Wanebo HJ. Giant condyloma acuminatum (Buschke-Lowenstein tumor) of the anorectal and perianal regions. Analysis of 42 cases. *Dis Colon Rectum* 1994;37:950-7.
7. Trombetta LJ, Place RJ. Giant condyloma acuminatum of the anorectum: trends in epidemiology and management: report of a case and review of the literature. *Dis Colon Rectum* 2001;44:1878-86.
8. H-AF C-JH, Lin C-C. Giant condyloma acuminatum (Buschke-Lowenstein tumor) of the anorectum. *J Soc Colon Rectal Surgeon (Taiwan)* 2002;13:131-6.
9. Aitola PT, Hiltunen KM, Matikainen MJ. Y-V anoplasty combined with internal sphincterotomy for stenosis of the anal canal. *Eur J Surg* 1997;163:839-42.
10. Lagares-Garcia JA, Nogueras JJ. Anal stenosis and mucosal ectropion. *Surg Clin North Am* 2002;82:1225-31,vii.
11. Habr-Gama A, Sobrado CW, de Araujo SE, Nahas SC, Birbojm I, Nahas CS, Kiss DR. Surgical treatment of anal stenosis: assessment of 77 anoplasties. *Clinics (Sao Paulo)* 2005;60:17-20.
12. Milsom JW, Mazier WP. Classification and management of postsurgical anal stenosis. *Surg Gynecol Obstet* 1986;163: 60-4.
13. Bonnichon P, Bellouard A, Richardson A, Bordier C, Diner P, Chapuis Y. Anal plasty after excision of giant condyloma acuminata. *Presse Med* 1988;17:74-6.
14. Oh C, Albanese C. S-plasty for various anal lesions. *Am J Surg* 1992;163:606-8.
15. De Toma G, Cavallaro G, Bitonti A, Polistena A, Onesti MG, Scuderi N. Surgical management of perianal giant condyloma acuminatum (Buschke-Lowenstein tumor). Report of three cases. *Eur Surg Res* 2006;38:418-22.
16. Burt CV. Thick split-skin graft for anal stenosis, Paget's disease, condyloma acuminata, pruritus ani and other anorectal conditions: report of four cases. *Dis Colon Rectum* 1961;4: 319-26.
17. Liberman H, Thorson AG. How I do it. Anal stenosis. *Am J Surg* 2000;179:325-9.
18. Klaristenfeld D, Israelit S, Beart RW, Ault G, Kaiser AM. Surgical excision of extensive anal condylomata not associated with risk of anal stenosis. *Int J Colorectal Dis* 2008; 23:853-6.
19. Chaidemenos G, Kogia M, Souparis A, Kastoridou C, Karakatsanis G, Xenidis E, Mourellou O. Radical excision and mesh-skin grafting for giant anorectal condyloma acuminatum. *Dermatol Surg* 2006;32:324-8.

**病例報告**

# 肛周區巨大尖形濕疣經由局部廣泛性切除，沒有接受立即性重建手術之經驗：一病例報告

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巨大尖形濕疣，或可稱之為 Buschke-Lowenstein 腫瘤，其特色是大的腫瘤外觀而且有浸犯到下層組織的傾向，雖然病理學上是良性的組織。此疾病通常發生在生殖器區。肛門周邊巨大尖形濕疣在英文醫學文獻上偶有報導。然而在台灣，到目前為止，只有兩例的肛門周邊巨大尖形濕疣被報導。在此我們報導一位六十二歲已婚的非同性戀者被診斷有肛門周邊巨大尖形濕疣。疣狀腫瘤大小有六乘六乘四公分，在肛門周邊並且往陰囊部位侵犯。此外，超過圓周三分之二的肛門上皮也被侵犯。手術方法是廣泛式切除。當時病理報告是尖形濕疣。傷口於四個月後以次級癒合機轉癒合。術後一年又八個月追蹤沒有發現任何尖形濕疣復發。也沒有肛門狹窄或失禁的情形發生。

**關鍵詞** 巨大尖形濕疣、廣泛性局部切除、次級癒合。