

Giant condyloma acuminatum quickly growing. Case report

R. PATTI, P. AIELLO, G.L. ANGELO, G. DI VITA

SUMMARY: Giant condyloma acuminatum quickly growing. Case report.

R. PATTI, P. AIELLO, G. L. ANGELO, G. DI VITA

Background. *Giant Condyloma Acuminatum (GCA) is a rare, slow growing, large cauliflower tumor of the penile foreskin and perianal region with benign histologic appearance but high propensity for local invasion and recurrences. GCA is associated with Human Papilloma Virus (HPV) types 6 and 11 and it also has considerable risk of neoplastic transformation into fully invasive squamous cell carcinoma in to about 5 years.*

Objective. *Because of the rarity of perianal GCA, to date there is no general agreement on the best method for treatment. We wanted to know if surgical approach only was a good method to treat our case.*

Case report. *A 28 years old man, HIV-negative, with a 4 years history of perianal GCA quickly growing underwent full thickness local excision at least 0,7 cm margin of normal tissue with skin grafting taken from the thighs. Fecal contamination was avoided by diet and loperamide per os. At two years follow-up no recurrence was detected.*

Conclusion. *Surgical approach with full thickness excision and immediate skin-grafting and regular follow-up demonstrated effective to treat GCA and to minimize disease recurrence.*

RIASSUNTO: Condiloma acuminato gigante a rapida crescita. Caso clinico.

R. PATTI, P. AIELLO, G. L. ANGELO, G. DI VITA

Introduzione. *Il condiloma acuminato gigante (GCA) è un raro tumore a lenta crescita, vegetante che colpisce più frequentemente il prepuzio e la regione perianale, con un aspetto istologico benigno ma ad elevata tendenza alla invasione locale ed alle recidive. Il GCA è associato alla infezione da parte dei sierotipi 6 ed 11 del Papilloma Virus Umano ed ha un alto rischio di trasformazione neoplastica in carcinoma invasivo a cellule squamose in 5 anni.*

Obiettivi. *Data la rarità del GCA a localizzazione perianale, ad oggi non ci sono linee guida ben definite riguardo il trattamento. Lo scopo del report è stato quello di verificare se il solo approccio chirurgico fosse sufficiente per la prevenzione delle recidive.*

Caso clinico. *Un uomo di 28 anni, sieronegativo per HIV, con una storia clinica di GCA insorto 4 anni prima e cresciuto rapidamente, è stato sottoposto ad un'ampia escissione della lesione con un margine dal tessuto sano di 0,7 cm e ricostruzione plastica della perdita di sostanza mediante utilizzo di lembi cutanei di scorrimento. La contaminazione fecale della ferita è stata evitata mediante l'adozione di misure dietetiche adeguate e la somministrazione di loperamide per os. A due anni di distanza non sono state riscontrate recidive.*

Conclusioni. *Il solo approccio chirurgico con ampia escissione della lesione ed immediata ricostruzione della perdita di sostanza, mediante l'impiego di lembi cutanei di scorrimento, è risultato efficace nel trattamento del GCA, come dimostrato dal follow-up a due anni.*

KEY WORDS: Giant Condyloma Acuminatum (GCA) - Buschke-Loewenstein tumor.
Condiloma acuminato gigante - Tumore di Buschke-Loewenstein.

Introduction

Giant Condyloma Acuminatum (GCA) or Buschke-Loewenstein tumor is a rare, slow growing, large,

cauliflower-like tumor, originally described by Buschke in the penile foreskin in 1896. It was further delineated in more detailed form in 1925 by Buschke and Loewenstein. The first reported case of GCA in the perianal region was described in 1965 by Dawson (1) et al. Until 1994, 42 cases of perianal GCA (2) were reported. In 2001 the cases of GCA described in the literature were 51 (3), whereas from 2001 to 2009 the cases published are about 20.

GCA has a benign histologic appearance, invades by expansion rather than by infiltration, leaving basement

membrane intact, and shows a well-stratified epithelium with minimal cellular dysplasia. GCAs do not give metastases but have high propensity for local recurrence, fistulization or perineal abscesses, ulceration, and hemorrhage difficult to control (4). Also GCA has considerable risk of neoplastic transformation into fully invasive squamous cell carcinoma.

There is still no general agreement on the best method of treatment for perianal GCA due to the relative rarity of the disease, the propensity to local invasion and recurrences and for its localization that results associated with high risk of wound infection.

We report a case of perianal GCA quickly growing successfully treated by surgical excision only.

Case report

A 28 years old man was admitted to our Surgical Unit in the October 2008 due to the presence of a mass in perianal region. He dated the beginning of his complaint in February 2004, when he referred the arising of an asymptomatic mass of about 1 cm in proximity of the anus. Mass slowly increased in volume up to reach the size of about 3 cm in December 2007. In January 2008 the patient complained of serotine fever for 20 days treated with antipyretic drugs. Since this period the perianal lesion rapidly increased. He denied sexual promiscuity and alcohol or drugs abuse.

At the physical examination a giant, 10 x 8 cm cauliflower-like, perianal lesion (Fig. 1) was revealed associated with small condylomatosis lesions in the scrotum; the penis didn't present any alteration. By proctoscopy the anal canal was found not to be involved and condylomatosis lesions stopped in the transition muco-cutaneous zone. The inguinal lymph nodes were normal. Dermatologic examination revealed no other condylomata. Test for syphilis, anti-HIV 1-2 antibodies, HbsAg, and anti-HCV antibodies assay were all negative. The lymphocyte subpopulations was within the normal range. The papillomavirus (HPV) research was positive for genotype 6 e 11. A wide full thickness local excision with at least 0,7 cm margin of normal tissue was performed. The wound was covered with skin grafts taken from the thighs. The small condylomata of scrotum were cauterized.

Fecal contamination was avoided by diet and Loperamide per os. Postoperative course was uneventful. At the histological examination the diagnosis was GCA without squamous cell carcinoma foci. The patient was checked every 15 days for the first six months and afterward once at month (Fig. 2). At two years follow-up no recurrence was detected. No evidence of anal canal stenosis or incontinence was recorded.

Discussion

GCA is predominant in the male sex with a ratio of 2,7:1. The mean age of presentation is 44 years (5) and only three cases has been reported in children (6). GCA occurs more frequently in patients affected by acquired or iatrogenic immunosuppression with a rapid growing. In subjects with normal immunological status GCA is associated with slow growing, even of 20 years of duration. Often infact the patients themselves have self ne-



Fig. 1 - Preoperative picture. 10x8 cm cauliflower, perianal lesion associated with small condylomatosis lesions in the scrotum.



Fig. 2 - The same patients one month after surgery.

glect and understimation of the disease (7). Condyloma spreads in circumferential way from the transition muco-cutaneous zone to the perianal region up to 5-10 cm. The anal canal is often not involved by the disease whereas frequently it involves the external genitals.

Some authors consider GCA as an intermediate lesion between benign acuminatus condyloma and squamous cell carcinoma (8). These lesions are caused by papillomavirus. More than 40 type of papillomavirus have

been identified to date, some of which are the aetiological agents causing verrucas and papillomas that can occur in various anatomical sites. Human papilloma virus types 6 and 11 generally lacking malignant potential, have been demonstrated in the majority of published cases of condyloma acuminatum and GCA (7), instead types 16 and 18 are more frequently associated with higher degrees of dysplasia, carcinoma in situ and invasive carcinoma (7). Human papillomavirus may be acquired via sexual transmission but also vertical transmission and auto- or hetero-inoculation from extragenital contact (hand warts) (6).

The pathogenesis of papillomavirus infection is undoubtedly influenced by the host's immune response, and particularly by cell-mediated response, which mainly involves the CD8+ lymphocytes and natural killer, whose activity is boosted by interferons (4). Immunosuppression is a risk factor for the rapid growing of condylomas and their malignant transformation (9,10). GCA and squamous cell carcinoma can coexist in 30 to 56% of patients (2,8). Whether these lesions represent two separate entities or a progression of the primary GCA into a malignant lesion is unclear (11). Increased viral gene expression or inability to mount a cytotoxic immune response or local irritation have been proposed as factors responsible to initiation carcinogenesis (12). The average time of transformation of GCA in carcinoma is estimated to be about 5 years (2). Therefore, a major risk of malignant transformation is associated with long duration of disease.

Due to the rarity of GCA, there is no guidelines for the treatment, in fact GCA has been treated by a variety of modalities. Sometimes the literature reports include patients with GCA in neoplastic transformation. In this case the therapeutic approach needs to be more aggressive and often includes radiotherapy, chemotherapy or their combination. The surgical excision of the tumor represents the first step of treatment because only the histological examination consents to exclude the presence of squamous cell carcinoma that require more radical management. The surgical excision of the tumor should be performed full thickness including cutaneous and subcutaneous tissues with clear margins in order to reduce the incidence of recurrence, however the free-margin distance is not well defined. Some authors reports the section with clear margin at 1-5 cm (4), others (5) describe 1cm and others 0,5 cm (13). In our case the section was performed at almost 0,7 cm from clear margins. Various methods of treating the skin defect after radical excision of perianal lesions have been described, such as healing by secondary intention (14), S-plasty (13), V-Y plasty (15) and mesh skin grafts (5, 16, 17). Colostomy for avoid a massive fecal contamination of perianal wound is rarely done (13). In the first days after surgery a low-residue diet and loperamide per os are prescribed in or-

der to avoid fecal contamination. Good results have been obtained with excision of GCA with CO₂ laser that consents to obtain optimal haemostasis and immediate sterilization of wound giving a best cicatrization respect to the traditional techniques (18,19).

After surgical resection the recurrence occurs in more than half case. In case of recurrence, a part from a re-excision of the lesion, non-surgical approaches both topical, systemic and radiant treatments can be advocated. The immunotherapy have a good rationale, however it not always gains satisfactory results. Individual vaccines have been prepared with a claimed response rate ranging from 70 to 100% (20,21). Interferon has been used via topical, intralesional, or systemic somministration; the number of the reported cases is small and the results are contradictory (12). Beyond immunostimulatory effect, the interferon acts by antiviral and antiproliferative direct effects (12). Also the combination of the Etreinate or Acitretin per os and Imiquimod ointment has been reported to be effective in GCA (22); their effectiveness could be ascribed to their immunomodulating, antiproliferative and preapoptotic properties and to normalization of epidermal differentiation (22). Topical application of Podophyllin resulted effective in the treatment of acuminate condylomas but ineffective in the management of GCA (5). Topical chemotherapeutic drugs with or without oral therapy has been showed a slight effectiveness (23). The Acitretin is a retinoid drug and as retinoid have an anticancerogenic properties, also for the absence of side effects and for its simple use, it could be administered not only for the treatment of the GCA but also for the prevention of the recurrence (22).

The role of radiation therapy is controversial, because it can facilitate the transformation of GCA in squamous cell carcinoma (3).

A close follow-up is recommended in order to evidence the recurrence in early phase. To date, there is no data in the literature regards the duration of follow-up. It seems that the recurrences are more frequent in the first months after surgery.

Conclusions

In our patient the CGA growing occurred with two modalities, earlier slowly and then rapid, the rapid growing arising after an episode of fever. A so rapid growing of GCA has been observed also by Renzi et al. (14) in women pregnancy. Initial surgical approach with full thickness excision is recommended. Immediate skin grafts is necessary for cover the large wound. Loop colostomy in order to minimize wound contamination risk is not necessary. A regular follow-up is recommended to ensure no recurrence disease.

References

1. Dawson DF, Duckworth JK, Bernhardt H, Young JM. Giant Condyloma and Verrucous carcinoma of the genital area. *Arch Pathol* 1965;79:225-31.
2. 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.
3. 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.
4. Parise P, Sarzo G, Finco C, Marino F, Savastano S, Merigliano S. Giant condyloma acuminatum of the anorectum (Buschke-Lowenstein tumour): a case report of conservative surgery. *Chir Ital* 2004;56:157-61.
5. 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.
6. Tinsa F, Gharbi A, Essid A, Driss M, Bousnina S. Giant condyloma acuminatum in an infant. *Pediatr Dermatol* 2009;26:488-9.
7. Ergün SS, Kural YB, Büyükbabani N, Verim L, Akbulut H, Gürkan L. Giant condyloma acuminatum. *Dermatol Surg* 2003;29:300-3.
8. Creasman C, Haas PA, Fox TA Jr, Balazs M. Malignant transformation of anorectal giant condyloma acuminatum (Buschke-Loewenstein tumor). *Dis Colon Rectum* 1989;32:481-7.
9. Lorenz HP, Wilson W, Leigh B, Crombleholme T, Schecter W. Squamous cell carcinoma of the anus and HIV infection. *Dis Colon Rectum* 1991; 34: 336-338.
10. Kibrite A, Zeitouni NC, Cloutier R. Aggressive giant condyloma acuminatum associated with oncogenic human papilloma virus: a case report. *Can J Surg* 1997; 40: 143-145.
11. Renzi A, Giordano P, Renzi G, Landolfi V, Del Genio A, Weiss EG. Buschke-Lowenstein tumor successful treatment by surgical excision alone: a case report. *Surg Innov* 2006;13:69-72.
12. Geusau A, Heinz-Peer G, Volc-Platzer B, Stingl G, Kirnbauer R. Regression of deeply infiltrating giant condyloma (Buschke-Lowenstein tumor) following long-term intralesional interferon alfa therapy. *Arch Dermatol* 2000;136:707-10.
13. Paraskevas KI, Kyriakos E, Poullos EE, Stathopoulos V, Tzovaras AA, Briana DD. Surgical management of giant condyloma acuminatum (Buschke-Loewenstein tumor) of the perianal region. *Dermatol Surg* 2007;33:638-44.
14. Renzi A, Bruscianno L, Giordano P, Rossetti G, Izzo D, Del Genio A. Buschke-Lowenstein tumor. Successful treatment by surgical electrocautery excision alone: a case report. *Chir Ital* 2004;56:297-300.
15. Uribe N, Millan M, Flores J, Asencio F, Díaz F, Del Castillo JR. Excision and V-Y plasty reconstruction for giant condyloma acuminatum. *Tech Coloproctol* 2004;8:99-101.
16. Mestrovic T, Cavcic J, Martinac P, Turcic J, Zupancic B, Cavcic AM, Jelincic Z. Reconstruction of skin defects after radical excision of anorectal giant condyloma acuminatum: 6 cases. *J Eur Acad Dermatol Venereol* 2003;17:541-5.
17. 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.
18. Perisic Z, Lazic JP, Terzic B. Condylomata gigantea in anal and perianal region: surgical and CO2 laser treatment. *Arch Gynecol Obstet* 2003; 267: 263-5.
19. Frega A, Stentella P, Tinari A, Vecchione A, Marchionni M. Giant condyloma acuminatum or buschke-Lowenstein tumor: review of the literature and report of three cases treated by CO2 laser surgery. A long-term follow-up. *Anticancer Res* 2002;22:1201-4.
20. Abcarian H, Sharon N. Long-term effectiveness of the immunotherapy of anal condyloma acuminatum. *Dis Colon Rectum* 1982;25:648-51.
21. Eftaiha MS, Amshel AL, Shonberg IL, Batshon B. Giant and recurrent condyloma acuminatum: appraisal of immunotherapy. *Dis Colon Rectum* 1982;25:136-8.
22. Erkek E, Basar H, Bozdogan O, Emeksiz MC. Giant condyloma acuminata of Buschke-Lowenstein: successful treatment with a combination of surgical excision, oral acitretin and topical imiquimod. *Clin Exp Dermatol* 2009;34:366-8.
23. Antony FC, Ardern-Jones M, Evans AV, Rosenbaum T, Russell-Jones R. Giant condyloma of Buschke-Loewenstein in association with erythroderma. *Clin Exp Dermatol* 2003;28:46-9.