often preceded by an infectious inflammatory or neoplastic genitourinary or colorectal pathology, or by surgery or other surgical procedures in these sites.

Fournier's gangrene has been described following various anogenital injections as well as mechanical, chemical and thermal trauma. Predisposing factors are debilitating chronic pathologies, diabetes and immunodeficiency. Sonographic characteristics include thickening of the scrotal skin and sometimes gas in the subcutaneous tissues (3). Although originally considered idiopathic, this syndrome is now known to be caused by a synergistic polymicrobial infection.

The scrotal area is the first site of involvement. The testes and the skin of the anal margin are spared since they have an alternative blood supply. Recent observations suggest that a local Shwartzman phenomenon might have an important role in the pathogenesis (4). Response to corticosteroid therapy might confirm the pathogenetic immunoallergic hypothesis (2).

The most serious complications are septicaemia and disseminated intravascular coagulation.

The introduction of new antibiotics has not significantly reduced mortality (5).

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# Buschke-Loewenstein Tumour is not a Low-grade Carcinoma but a Giant Verruca

*Sir*,

Buschke-Lowenstein tumour is a giant condyloma that is clinically malignant despite its benign histopathological features. In this report we present a case of a neglected Buschke-Loewenstein tumour which is the largest in the published literature.

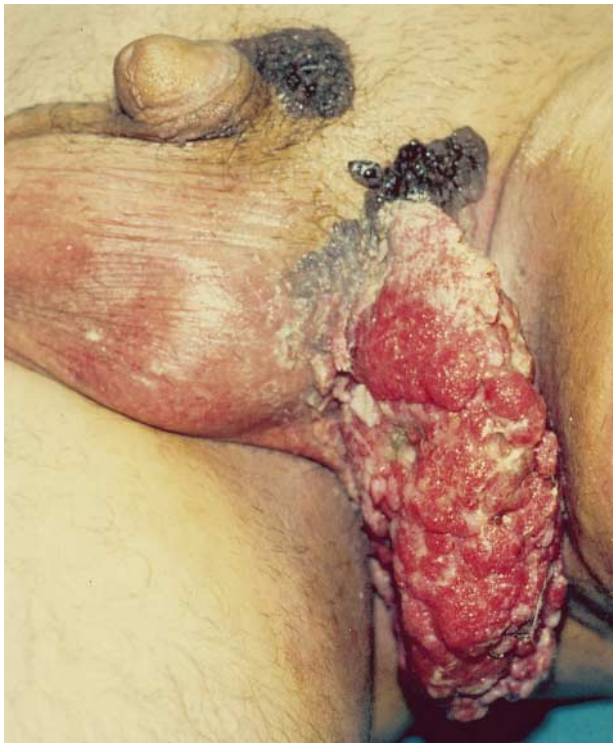

*Fig. 1.* The giant condyloma, 38 × 11 cm in diameter.

## CASE REPORT

A 50-year-old male patient presented in November 1996, with a giant genital warty lesion, which had been present for 20 years. The lesion, initially localized in the left inguinal region, had gradually increased in size over the years. The patient finally sought medical attention because of increased size, bleeding and pus drainage from the huge mass, which made coitus practically impossible. Examination revealed a cauliflower-like tumour, 38 × 11 cm in size, centred in the left inguinal fold and extending to the perianal region and mons pubis (Fig. 1). Dermatopathological examination of H & E sections revealed marked hyperkeratosis, acanthosis and papillomatosis of the epidermis. Hypergranulosis with coarse keratohyaline granules and some koilocytes were present in the superficial layers of the epidermis consistent with Buschke-Loewenstein tumour. Slight crowding and atypia in the keratinocytes were present within several high power fields, although in general dermatopathological features were consistent with ordinary condyloma. Immunohistochemistry with streptavidin biotin peroxidase technique (Biogenex) using polyclonal HPV antibodies failed to reveal positive staining.

The patient was treated with wide surgical excision, which provided satisfactory functional and cosmetic results.

## DISCUSSION

Buschke-Loewenstein tumour occurs predominantly in uncircumcised men, often below 50 years of age. It is usually localized to the glans penis, vulva, perineum and perianal region (1 – 3). In 1948, Ackerman described a similar neoplasm of the oral mucosa and used the term verrucous carcinoma to describe locally aggressive, exophytic, low-grade squamous

cell carcinoma with low incidence of metastases (1). Despite numerous reports in the literature, controversy continues as to whether verrucous carcinoma and Buschke-Loewenstein tumour are identical (1, 4 – 6).

The histopathological appearance of Buschke-Loewenstein tumour is almost identical to that of simple condylomata acuminata with the exception that it displays endophytic as well as exophytic growth pattern with broad bulbous down-growths of the squamous epithelium. On the other hand, verrucous carcinoma is considered to be a low grade of squamous cell carcinoma with minimal risk of metastases (1).

Recent evidence from molecular hybridization studies has implicated human papilloma virus (HPV) types 6 and 11 as most closely associated with Buschke-Loewenstein tumour. This is in contrast to HPV 16 and 18, which are more frequently associated with higher degrees of dysplasia, carcinoma *in situ* and invasive carcinoma (1, 2, 7).

The size and location of the tumour should be taken into consideration when deciding on the best form of therapy. Wide surgical excision is the cornerstone of therapy when possible (1, 3, 8). Differential diagnosis between giant condylomata acuminata and verrucous carcinoma is extremely important with respect to treatment, prognosis and long-term follow-up. Patients with extensive lesions may require concomitant radiotherapy and/or systemic chemotherapy with a combination of methotrexate, 5-fluorouracil, bleomycin or mitomycin C. Etretinate and intralesional interferon are also reported to be useful adjuvant treatment modalities (1, 9). Radiation therapy is controversial and should only be considered in patients with non-resectable tumours as anaplastic transformation may be induced (1, 3). In penile Buschke-Loewenstein tumours where extensive excision can not be performed, cryosurgery with or without topical fluorouracil, intralesional bleomycin and laser resection has been used successfully (1). Podophyllum has been reported to be ineffective (9).

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