Giant verrucous carcinoma of the penis
– case report –

C. Gîngu, A. Turcanu, A. Dick, M. Crasneanu, S. Patrascoiu, C. Surcel, V. Zogas, Liliana Domnișor, Mihaela Mihai, M. Hărza, I. Sinescu

Center of Urologic Surgery, Dialysis and Renal Transplantation, Fundeni Clinical Institute

Abstract

Introduction: Penile verrucous carcinoma is a type of well differentiated squamous carcinoma, with a slow invasive growth rate. It represents 5% to 24% of all penile malignant tumors and 5% to 16% of all penile squamous cell carcinomas[1]. Macroscopically, verrucous carcinoma presents itself as an exophytic, cauliflower-like tumor, with broad-based implantation. In most cases the tumor is sized between 1 and 3 cm, although giant destructive forms have been described.

Patient, Method and Results: Patient IL, aged 31 years, with a history of pulmonary TB, had a penile tumor that appeared about 11 years ago, it slowly progressed, it included the entire penis and part of the scrotum, without any medical evaluation history prior. Local clinical examination revealed a bulky tumor, sessile, with a cauliflower-like aspect, ranging from the region of the glans, near the urethral meatus, to the rest of the entire circumferential length of the penis, with extension to the scrotum. There were no detectable inguinal lymph nodes on palpation. In the first stage he underwent excisional biopsy with partial amputation of the penis and resection of the affected scrotal skin. The reconstruction was postponed because of the important skin defect, therefore we buried the penile stump in a scrotal pouch with a cutaneous urethrostomy. The histopathological result was medium differentiated verrucous carcinoma (G2). For the second stage, the patient underwent penile reconstructive surgery with split skin graft, 3 months after the first operation.

Results: The 2 years follow-up revealed good mictional status, the wound healed normally and he resumed normal sexual activity with satisfactory erection. No local or distant clinical and imagistic recurrences were registered.

Conclusions: Verrucous carcinoma of the penis has a good prognosis and should be managed by conservative surgery when possible. Penile reconstruction after major oncologic surgery, when possible, insures a good quality of life after a mutilating procedure and should only be attempted in specialized centers.

Keywords: Penis, Surgery, Verrucous carcinoma, reconstruction

Correspondence: Dr. Constantin Gîngu
Center of Urologic Surgery, Dialysis and Renal Transplantation, Fundeni Clinical Institute
Șoseaua Fundeni nr. 258, Sector 2, 022328, Bucharest
Tel./Fax: 021-300.75.70
E-mail: cgingu@gmail.com
Introduction

Penile verrucous carcinoma is a type of well differentiated squamous carcinoma, with a slow invasive growth rate. It represents 5% to 24% of all penile malignant tumors and 5% to 16% of all penile squamous cell carcinomas[1]. The majority of the cases, nearly two-thirds, occur before the age of 50. Regional lymph node metastasis is rare and distant metastasis has yet to be reported[2].

Macroscopically, verrucous carcinoma presents itself as an exophytic, cauliflower-like tumor, with broad-based implantation. In most cases the tumor is sized between 1 and 3 cm, although giant destructive forms have been described.

Patient, Method and Results

We are going to present the case of a young male patient, with a history of pulmonary TB. At the age of 31 he was admitted for a penile tumor that had appeared about 11 years prior, and had slowly progressed, without any medical evaluation.

At presentation the tumor included the entire penis and part of the scrotum, and had a strong fetid smell. Local clinical examination revealed a bulky tumor, sessile, with a cauliflower-like aspect, ranging from the region of the glans, near the urethral meatus, to the rest of the entire circumferential length of the penis, with extension to the scrotum. There were no detectable inguinal lymph nodes on palpation.

Given the size and the extent of the tumor the surgical treatment was divided in two stages.

For the first stage the patient underwent excisional biopsy with partial amputation of the penis and resection of the affected scrotal skin. The patient was placed in a lithotomy position. The tumor was isolated with a glove to prevent spillage in the operating field. A wide incision of the skin was made at the base of the penis with oncologic safety margins. The superficial layers were transected to the level of Buck’s fascia with ascendent penile degloving close to the coronal sulcus. At this level partial penectomy was performed in the standard manner, with en block excision.

At this point vesical suprapubic catheterisation was performed. The reconstruction was postponed because of the important skin defect, therefore we buried the penile stump in a scrotal pouch with a cutaneous urethrostomy.

Postoperative evolution was simple, with no complications. The histopathological result showed a medium differentiated verrucous carcinoma (G2).

For the second stage, the patient underwent penile reconstructive surgery with split skin graft, 3 months after the first operation.

The patient was placed in supine position. A minimal circular incision was made around the penile stump. Dissection and mobilization of the stump from the scrotal pouch was performed.

Fig. 1 A, B: Initial clinical aspect

Fig. 2 A: Tumor isolation, B: Wide skin incision, C: Penile degloving, D: Post amputation, E: Vertical scrotal incisions with the creation of a pouch, F: Final aspect

Fig. 3 A: After 2 months from stage I, B: Circular incision around the meatus, C: Dissection and mobilisation of the penile stump from the scrotal pouch, D: Neo glans reconstruction
After the new glans reconstruction was finished, a free split thickness skin graft was harvested from the left thigh, prepared on the back table and quilted on the penile shaft with multiple stitches.

Fig. 4. A, B: Graft fixation, C: Final aspect

Again the postoperative recovery was fast and with no complications and the patient was discharged 5 days after the procedure.

The 2 years follow-up revealed good mictional status, the wound healed normally and he resumed normal sexual activity with satisfactory erection. No local or distant clinical and imagistic recurrences were registered.

Fig. 5 A, B, C, D: The 2 years follow up

**Discussions**

Verrucous carcinoma is an uncommon, well-differentiated variant of SCC with slow growth rate and without any distant metastasis. It was firstly described in 1948 by Ackerman in the oral cavity [3]. By now, it has been also described in other sites, like: female genitalia, penis, soles, anus and any location on the skin[4].

The etiologic factors of penile verrucous carcinoma are unclear. Risk factors like phimosis, chronic infection (balanoposthitis, lichen sclerosus, balanitis xerotica obliterans) and treatment with sporalene and ultraviolet A phototherapy, were identified by the Karolinska Institute based on a Medline search of published literature from 1966 to 2000 [5]. Even if earlier studies stated that human papilloma virus (HPV) infection, especially HPV-6 and HPV-11, play an important role in the pathogenesis of the tumor [6], other studies have not found a significant association between penile verrucous carcinoma and human papilloma virus [1],[4].

Penile verrucous carcinoma is most often described at glans or foreskin levels, but it can appear anywhere on the penis. It presents itself as a exophytic mass, cauliflower-like, that may be ulcerated or foul smelling.

Microscopically, penile verrucous carcinoma is described as a very well differentiated papillary neoplasm. It is considered as Ta stage on the TNM staging system.

The treatment for penile verrucous carcinoma is surgical, usually in a conservative manner, partial penectomy or local excisions, if feasible, being the techniques of choice[7]. Hatzichristou et al[8] suggested that glansectomy is an appropriate treatment for patients with penile Verrucous carcinoma confined to the glans penis and that partial or total penectomy should be reserved as second line treatments of local recurrences. Surgical margins are a must and insure a good oncologic outcome, 5 to 10 mm being considered safe [9]. Until now there are no reports of regional lymph node metastasis in patients with penile verrucous carcinoma [4],[10]. In our case inguinal lymphadenectomy was not necessary.

**Conclusions**

Verrucous carcinoma of the penis has a good prognosis and should be managed by conservative surgery when possible. Penile reconstruction after major oncologic surgery, when possible, insures a god quality of life after a mutilating procedure and should only be attempted in specialized centers.
Bibliography


