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Atypical Evolution of Squamous Cell Carcinoma of the Male Urethra: A Rare Case Report

Sinaa Mohamed[1], Hajji Fouad[2], Bouzid Balla[2], Abdelghani Amani[2], Ftouhi Mohamed[3], Albouzidi Abderrahmane[4]
[1]Department of pathology, Military Hospital Moulay Ismail, Meknes, Morocco
[2]Department of urology, Military Hospital Moulay Ismail, Meknes, Morocco
[3]Department of medical oncology, Military Hospital Moulay Ismail, Meknes, Morocco
[4]Department of pathology, Military Hospital Mohammed V, Rabat, Morocco

Case Report

***Corresponding author**
Sinaa Mohamed

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Abstract: Squamous cell carcinoma of the male urethra is an exceptional tumor. All types tumors of the urethra representing less than 1% of urinary tract tumors. The prognosis remains unfavorable. We report the ninth case observed which manifested by a transtumoral spontaneous breaking of squamous cell carcinoma of the urethra in a patient aged 58 years-old. He was treated by external irradiation associated with chemotherapy, and died after progression of the disease. The spontaneous breaking of tumor of the urethra is an exceptional discovery testifying to a local evolution unfavorable, making these tumors difficult to operate. However, current hope lies in therapeutic protocols combining radio-chemotherapy.

Keywords: urethra, squamous cell carcinoma, breaking, radiotherapy, chimiotherapy

INTRODUCTION

Primary carcinoma of the urethra is a rare tumor, representing less than 1% of urinary tract tumors. It predominates in women by ratio of 3/1. Its principal localisation in man is the bulbar-membranous urethra (2/3 of the cases). The histological type more common is squamous cell carcinoma (80% of cases) [1]. The diagnosis of these tumors is generally delicate because the symptomatology is not very specific and dominated by the presence of a palpable mass in the urethra and the existence of an obstructive urinary syndroma. Its treatment is mainly surgical but often mutilating. The combination of radiotherapy and chemotherapy may be considerate a hope of future treatment but the prognosis remains unfavorable in the majority of cases. We present a rare case of squamous cell carcinoma of the urethra in men revealed by a breaking of the membranous urethra, with review of the literature and discuss the epidemiological, pathological and therapeutic aspects of this disease.

CASE REPORT

Men aged 58 years-old, has a history of dysuria and of intermittent urethorrhagia. He was admitted for acute urinary retention with skin budding mass extending from the perineo-scrotal, anal and inguinal region. The clinical examination demonstrated inguinal ganglion firm and fixed. A retrograde urethrography demonstrated a irregular stenosis in the bulbous urethra (Figure 1). In per-operation, the urologist was discovered an indurated tumor mass of the bulbous-membranous urethra, surrounded Inflammatory and necrotic tissue (Figure 2). Multiple biopsies of the skin lesion and urethral tumor was performed. Histological study of urethral biopsy is showed a malignant proliferation made of massive and islands of large polygonal malignant cells containing keratinpearl, and intercellular bridges (Figure 3). Tumor cells have abundant eosinophilic cytoplasm, nuclei with moderate cytonuclear atypia (Figure 4). The stroma is reduced and contains inflammatory infiltrate. We were concluded with a well-differentiated squamous cell carcinoma of the urethra. The tumor was classified T4, N+, Mx (TNM classification 2004 of tumors of urethra) (Figure 5). The oncologist was prescribed concomitant radiochemotherapy because of the local evolution of the tumor. He has had three weekly chemotherapy sessions Cisplatin and 5-FU followed by two sessions of radiotherapy. The evolution was marked by a little clinical regression of the mass, which motivated the continuation of the protocol. PET showed extensive pelvic nodal and pulmonary and liver metastases. He has died in 9 months array of cancerous cachexia.

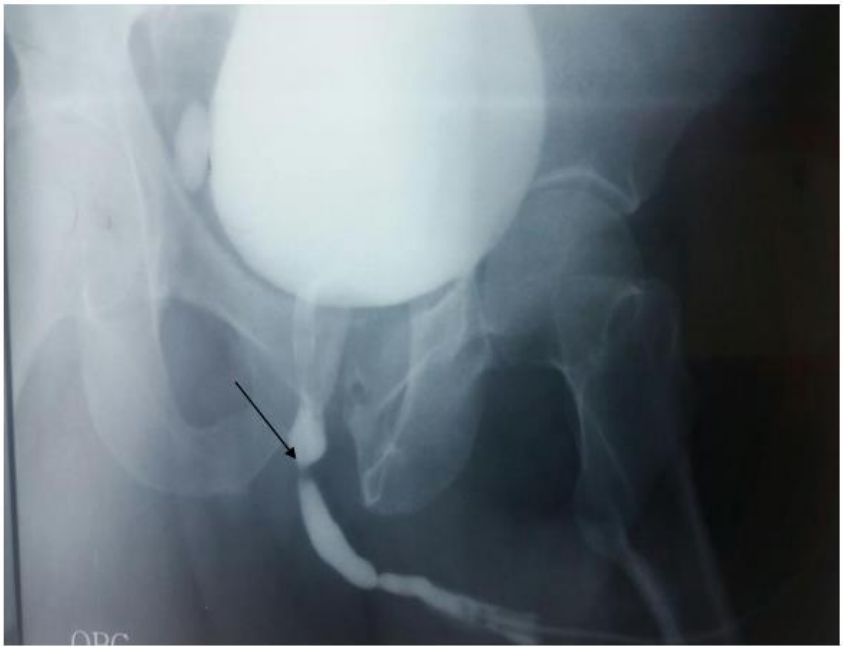


Fig-1: Retrograde urethrocystography, stenosis of the bulbo-membranous urethra (arrow)

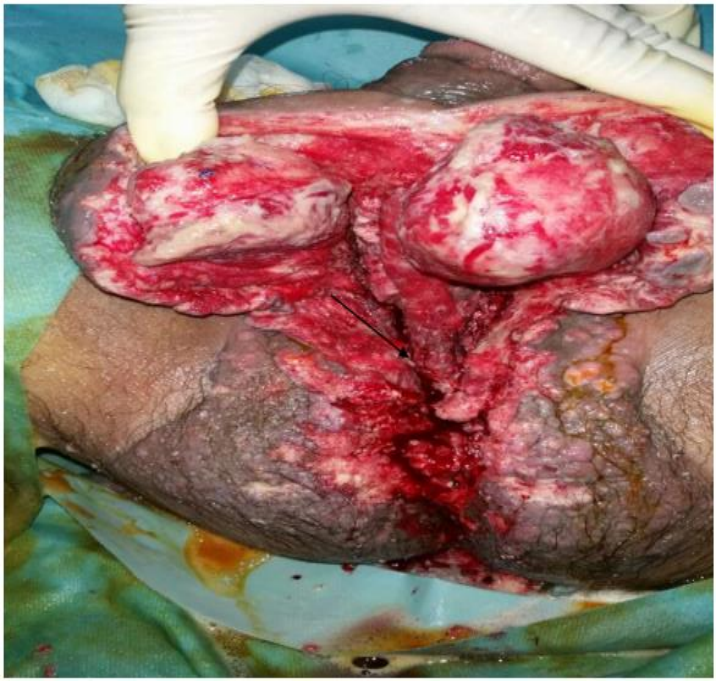


Fig-2: skin budding mass extending from the perineoscrotal, anal and inguinal region, and indurated tumor mass of the bulbous-membranous urethra (arrow)

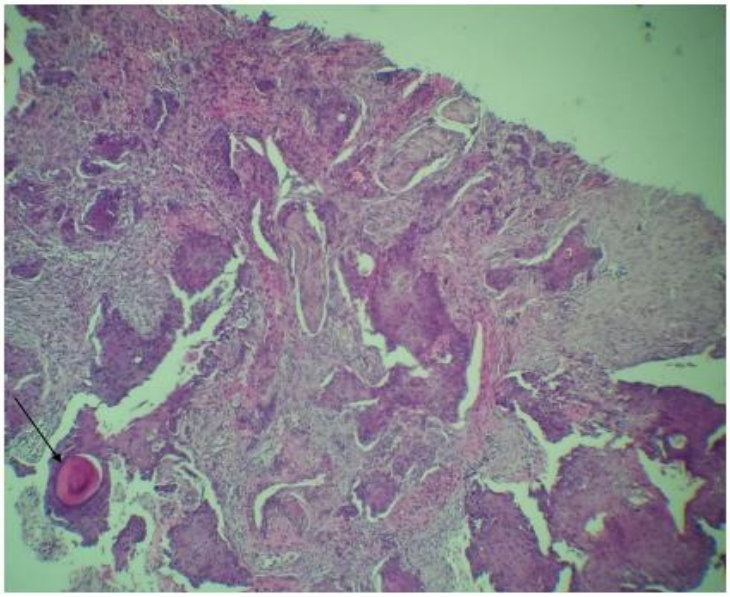


Fig-3: urethral biopsy: Malignant proliferation made of massive and islands of large polygonal malignant cells containing keratinpearl (arrow)

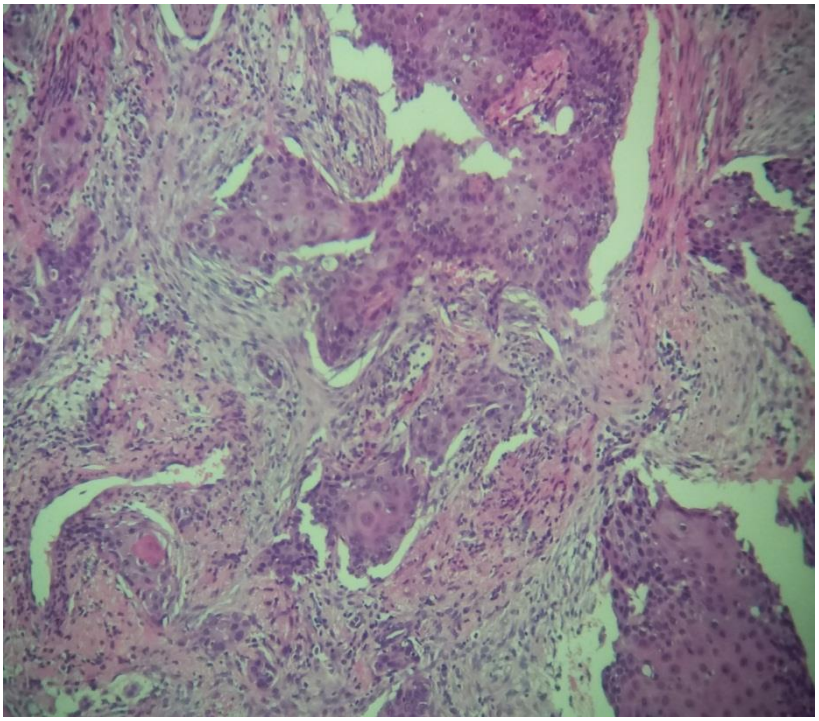
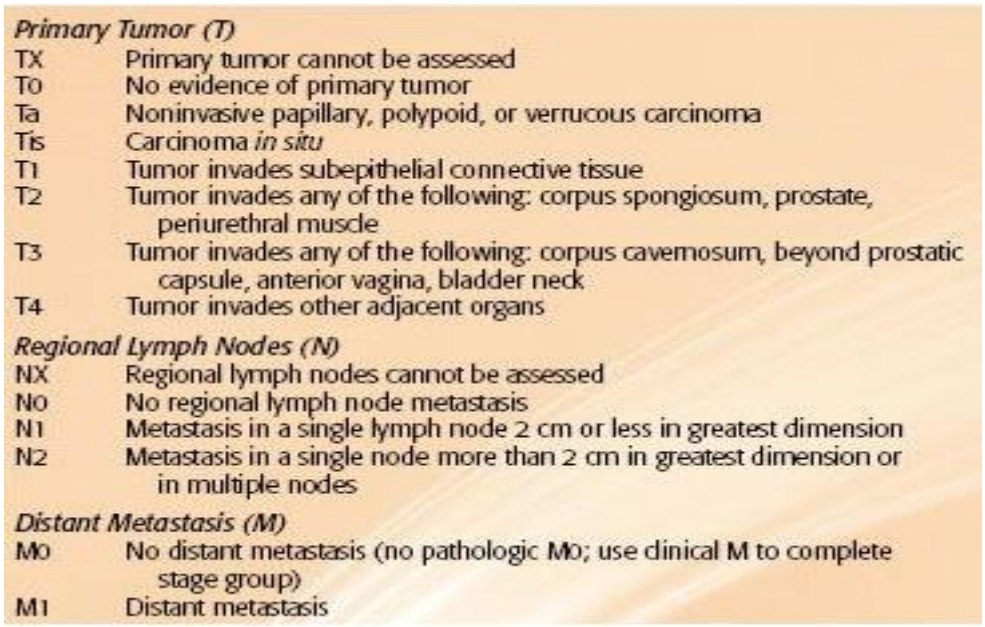


Fig-4: Tumor cells have intercellular bridges, abundant eosinophilic cytoplasm, nuclei with moderate cytonuclear atypia



Primary Tumor (T)	
TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
Ta	Noninvasive papillary, polypoid, or verrucous carcinoma
Tis	Carcinoma *in situ*
T1	Tumor invades subepithelial connective tissue
T2	Tumor invades any of the following: corpus spongiosum, prostate, periurethral muscle
T3	Tumor invades any of the following: corpus cavernosum, beyond prostatic capsule, anterior vagina, bladder neck
T4	Tumor invades other adjacent organs
Regional Lymph Nodes (N)	
NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis in a single lymph node 2 cm or less in greatest dimension
N2	Metastasis in a single node more than 2 cm in greatest dimension or in multiple nodes
Distant Metastasis (M)	
M0	No distant metastasis (no pathologic M0; use clinical M to complete stage group)
M1	Distant metastasis

Fig-5: Staging TNM 2004 of tumors of the urethra (male or female)

DISCUSSION

Primary cancer of the male urethra is very rare. Less than seven hundred cases of a tumor of the male urethra were noted in the literature. The mean age is about 60 years [1]. We report the ninth case observed which manifested by a transtumoral spontaneous breaking of the urethra.

The exact etiology of this cancer is still unknown. Some favorable factors have been proposed: a history of urethral stenosis noted in 25-75% of patients, a history of chronic infectious, urethral traumatisme, urethral polyps which could act as a starting point for the secondary degeneration [1, 2].

Approximately 2/3 of the urethral tumors are observed in the bulbo-membranous urethra. Rarely in the penile urethra, and exceptional in the prostatic urethra [1, 2]

Clinically, the symptoms are not specific and wrongly considered of a commun stenosis, resulting in diagnoses that were too late. We must remember the need for complementar exam so as not to delay the diagnosis of urethral cancer whenever a patient is seen to follow for urethral stenosis an unusual event such as dilatation haemorrhagic, fast aggravation of dysuria, fistula or urethral purulent selling. In our case, we noted a breaking of the transtumoral urethra with the constitution of a large budding mass in the skin. It is an exceptional evolution of the tumor and also of an exceptional etiology of breaking of the urethra by tumor invasion of the urethral well. The diagnosis was made after flattening of the mass and the per-operative discovery of a bulbar tumor of the urethra [2].

Urethrography makes it possible to evoke the diagnosis by showing characteristic stenosis as is the case with our patient.

Histologically, 80% of malignant tumors of urethra are squamous cell carcinoma (SCC), 15%, urothelial carcinoma and 5% adenocarcinomas [3]. squamous cell carcinoma is preferentially localised at the level of anterior or bulbar-membranous urethra, while the urothelial carcinomas localised at the level of the urethra prostatic [3, 4].

Cancer of the male urethra is a malignant disease which extends to erectile bodies or regional lymph nodes. Adenomegaly inguinal are found in one third of the cases. Metastases are observed in only 10 to 20% of cases. Before any treatment, evaluation and staging of the tumor are based on clinical examination, urethrocystoscopy, abdomino-pelvic computed tomography (CT) and magnetic resonance imaging (MRI). The CT gives a good analysis of ganglionnar and pelvic areas. The MRI of penis allows measuring the extention of tumor beyond the spongy body [5].

Treatment is based on extensive surgical excision of which depends on the location and stage of the tumor, except for rare cases of superficial tumors who may benefit from endoscopic treatment (transurethral resection, laser).The treatment consists of a urethrectomy segmental for case of localized tumor and a radical penectomy with urethrostomy perineal for lesions of the anterior urethra. However, a cystoprostatectomy with penectomy and urethractomy for the tumor of the bulbo-membranous urethra, or even emasculation and pubectomy for tumors of the posterior urethra [6, 7].

The prognosis of lesions of the anterior urethra is better than that of the lesions of the bulbo-membranous urethra. According to Dalbagni and his collaborators, survival after 5 years is 69% and 26%, respectively, for lesions the anterior urethra and the bulbo-membranous urethra [8]. The tumors of the posterior urethra are generally diagnosed at a more advanced stage than anterior urethral tumors because they are less accessible to interventions diagnostic and therapeutic and therefore have a worse prognosis.

Radiotherapy is considered to be disappointing, especially for lesions of the bulbo-membranous urethra. Kaplan and al. reported that of 186 cases in the literature, there were 11 cases treated with radiotherapy only; only two patients had survival more than 5 years [9].

Chemotherapy has been successful in advanced stages, in addition to surgical treatment mutilating in order to obtain local control of the disease.

However, the current hope in patients with squamous cell carcinoma of the urethra with advanced stages lies an extensive surgical resection and protocols combining chemotherapy (5-FU and cisplatine or mitomicyne) with radiotherapy (25-40 GY) [10].

Bulbar urethral disease carries a worse prognosis than distal disease. Results from treatment with surgery alone for bulbar SCC have been disappointing, with 5-year disease free survival of 0% to 15%, because of its tendency for presentation at an advanced local and distal stage. More recently, combined treatment with chemoradiotherapy and surgery was suggested to improve local control and survival; however, the optimal treatment strategy is not known [11].

CONCLUSION

The spontaneous rupture of the tumoral urethra is an exceptional discovery attesting to an unfavorable local evolution, making these tumors difficult to operable. The scarcity of this lesion and the small number of cases has made it difficult to harmonize the therapeutics protocols. However, the combination of radiotherapy and chemotherapy remains a therapeutic hope in the future.

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