



AN UNUSUAL PRESENTATION OF URETHRAL STRICTURE AS PRIAPISM

Urology

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ABSTRACT

Urethral stricture is a very common in urology practice in developing countries. Association with urethral stricture and penile cancer leading to priapism is very rare. There is limited literature on urethral stricture disease with penile cancer and malignant priapism. Chronic inflammation is one of the causative factor for penile malignancy. Most of these patients present to clinician lately with late tissue diagnosis. So surgical management is not curative however, carcinoma of the penis presenting with priapism is a loco-regional disease and its aggressive treatment with multimodalities is curative in some cases. Hence, we report this rare case of urethral stricture with histopathological diagnosis of primary squamous cell carcinoma of the penis presenting with malignant priapism, to highlight the significance of diagnosing this rare condition and that aggressive treatment can improve survival in these patients.

KEYWORDS

squamous cell carcinoma; bulbar urethral stricture; priapism; radical penectomy.

CASE REPORT

A 65 year old male, previously diagnosed case of bulbar urethral stricture on supra-pubic catheter since last nine years presented to urology OPD with complaint of urethral discharge and painless erect penis. Patient had no comorbidity and had no addiction to smoking or tobacco chewing. He was normoglycemic with normal renal biochemical parameters. On local examination, 4x2 cm and 2x2 cm ulceroproliferative growth seen at ventral aspect of penis [Figure 1] with palpable mobile lymph nodes in left inguinal region.



Figure 1 : preoperative picture showing priapism with ulcerative growth over penis

Retrograde urethrogram (RGU) and micturating cystourethrogram (MCU) showed long segment urethral stricture with urethra-cutaneous fistula [Figure 2].

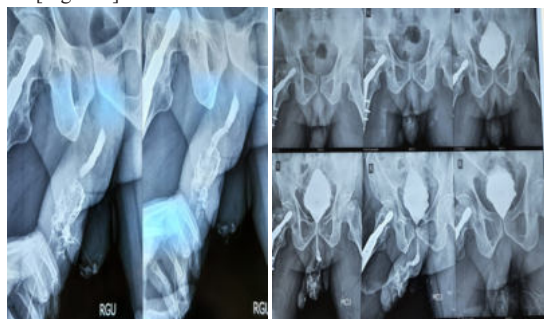


Figure 2 : retrograde urethrogram and micturating cystourethrogram showing spillage of dye in penile region of urethra

Patient was planned for wedge biopsy from ulcer margin, which on histopathology showed dysplastic squamous epithelium showing tumor cells arranged in sheets and singles with high N:C ratio, pleomorphic nuclei, prominent nucleoli and moderate amount of eosinophilic cytoplasm. These tumor cells infiltrate into surrounding stroma. Keratin pearls and mitotic figures seen. Mixed inflammatory infiltrate noted comprising of predominantly lymphocytes, plasma cells and few neutrophils thus suggestive of a well differentiated infiltrating squamous cell carcinoma. Contrast Enhanced computed tomography of abdomen and pelvis showed an irregular heterogeneously enhancing lesion in the penis with few enlarged left inguinal lymph nodes, prostate and seminal vesicles were normal; There were no distant metastases on chest x ray and abdominal ultrasound. Patient then underwent radical penectomy with bilateral modified inguinal lymph node dissection with perineal urethrostomy. Patient was discharged on postoperative day six on antibiotics for seven days with healthy sutured wounds and suprapubic cystostomy and perineal urethrostomy in situ [Figure 3].



Figure 3: postoperative day 6 – follow up

Patient was advised to take regular sitz bath, dressing and to follow up on outdoor basis.

Histopathology report of specimen of penis and lymph node showed infiltrating moderately differentiated squamous cell carcinoma [Figure 4A, 4B], circumferential skin margins free; left superficial inguinal lymph node is involved by tumor or metastatic; left deep inguinal lymph node reactive; right superficial inguinal lymph node is metastatic and right deep inguinal lymph node is metastatic; pT2N2Mx.

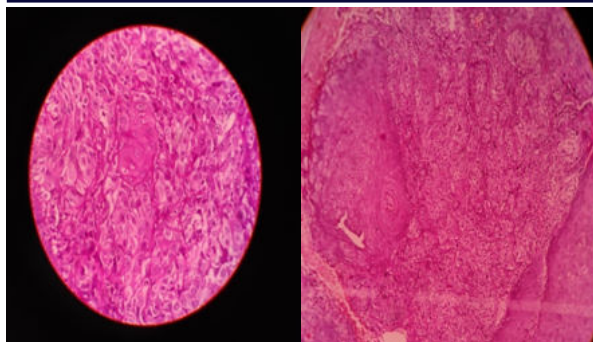


Figure 4(A): Histopathology(40X,Hematoxylin and Eosin stain) showing moderately differentiating squamous cell carcinoma

Figure 4(B): Histopathology(100X, Hematoxylin and Eosin stain) showing moderately differentiating squamous cell carcinoma

After histopathology report patient was referred to radiotherapy department for further management with palliative cis-platin based chemotherapy regimen. On regular follow up after three months patient is doing fine.

DISCUSSION :

Urethral stricture is a very common disease in urology out patient department(OPD) in developing countries⁽¹⁾. Penile carcinoma represents about less than one per cent of all male cancers; Association with penile cancer and urethral stricture is a very rare, even literature show only few case reports. Malignant priapism⁽²⁾ is caused by invasion of malignant cells into the cavernosal sinuses and their associated venous systems caused by penile metastasis. There are only few reports on squamous cell carcinoma of penis leading to malignant priapism. Treatment of malignant priapism due to penile metastasis is only palliative and the prognosis is very poor. However, carcinoma of the penis presenting with priapism is a loco-regional disease and aggressive treatment with multimodality approach is curative in some cases.

Hence, we report this rare case of urethral stricture with primary squamous cell carcinoma of the penis presenting with malignant priapism, to highlight the significance of diagnosing this rare condition and that aggressive treatment can improve survival in these patients.

Present patient was already diagnosed as a case of bulbar urethral stricture and was on suprapubic cystostomy due to failed per urethral catheterization and for urethral rest.

Kathpalia *et al* reported a case of bulbar urethral stricture with an ulcerative lesion on the penis during follow up and was treated by partial penectomy for the same⁽³⁾. The authors had a view that urethral tumours may arise from areas of urethral stricture, and human papilloma virus may be a causative factor. Malik *et al*⁽⁴⁾ also reported a case presenting with urethral stricture that was treated with visual urethrotomy, diagnosed as penile cancer when penis became fungating and penectomy was done.

Priapism is defined as a full or partial erection that persists more than four hours after sexual stimulation and orgasm, or is unrelated to sexual stimulation. It may be ischaemic or non-ischaemic⁽⁵⁾. The most common etiology for NIP is a straddle injury.⁽⁵⁾ Other mechanisms include trauma, complications of penile diagnostic methods and vascular erosions, metastatic infiltration of the corpora.^(5,9)

Penile secondaries as described by Eberth⁽¹⁰⁾ usually starts with penile tumefaction⁽¹¹⁾. Malignant priapism is caused by invasion of malignant cells into the cavernosal sinuses and their associated venous systems. Differential diagnosis of Malignant Priapism are Peyronie's disease, thrombosis of the corpus cavernosum or thrombosis of the deep dorsal artery of the penis and idiopathic priapism⁽¹¹⁾. Malignant priapism is usually of low-flow type⁽¹⁰⁾. The most frequently involved sites are the genitourinary tract and the gastrointestinal system^(7,8). The other mechanisms for low-flow priapism include retrograde venous or lymphatic transport, arterial embolism, obstruction or thrombosis of the corpora cavernosa and neural pathway irritation by the metastatic tumor.^(6,7,10) Additionally, arterial rupture due to tumor invasion⁽⁷⁾ or high flow in the cavernosal arteries with diastolic reversal of flow may result in high-flow malignant priapism.^(7,8,10)

Present patient had a moderately differentiated squamous cell carcinoma histology, which probably due to rapid growth resulted in blockage of the cavernous sinuses leading to low-flow priapism. Magnetic resonance imaging may differentiate corporal metastasis priapism from true ischemic priapism due to venous outflow obstruction.⁽⁵⁾

The treatment of penile metastases depends on the location of the lesion and size, presence or absence of priapism, and the prognosis of the primary tumor.⁽⁷⁾ The Treatment of penile metastases with malignant priapism is aimed at palliation and improving quality of life, as prognosis is very poor with an overall survival duration of less than two years, various treatment modalities are wide local excision, partial or total penectomy, radical penectomy, radiotherapy, chemotherapy and a conservative approach.^(5,7,10,11) There are no treatment guidelines till date for the treatment of malignant priapism due to squamous cell carcinoma of the penis so treatment is individualized.

CONCLUSION

Multiple interventions for urethral stricture disease and a chronic inflammatory status, are risk factors for squamous cell carcinoma of genitourinary organs. In all long standing cases of urethral stricture and cases presenting with priapism especially in an old men, a possibility of penile cancer should always be kept in mind while managing these cases. Though malignant priapism is mostly due to metastases in corporeal bodies, primary malignancy of the penis can also present as priapism. The prognosis and life expectancy in penile metastasis is poor, but primary carcinoma with malignant priapism is primarily a loco-regional disease and such patients are salvageable with multimodality treatment.

All pictures were taken after written consent from the patient

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