Penile Gangrene and Urethrocutaneous Fistula Following Transurethral Resection of Prostatic Carcinoma. A Case Report

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Abstract Channel transurethral resection of prostate (TURP) is an accepted treatment for advanced carcinoma of prostate (CaP) to improve quality of life. We are presenting a case of penile gangrene and urethrocutaneous fistula following TURP in a CaP. This is the first case in literature to our knowledge.

Keywords TURP · Penile gangrene · Carcinoma of prostate · Urethrocutaneous fistula

Case Report

A 72 years old male presented with lower urinary tract symptoms (LUTS) of 6 months duration. He had undergone some colonic surgery 25 years ago and had end colostomy on the left side. The details of the surgery were not available. Per rectal examination revealed hard nodular prostate. Prostate-specific antigen (PSA) was more than 100 ng/ml. Ultrasound guided transrectal biopsy of prostate confirmed Cap with a Gleason score 4+3=7. Contrast computed tomography (CT) of abdomen showed normal liver, no colonic malignancy and rectal wall lipomatosis. Hematological and biochemical investigations were normal. Bilateral orchidectomy was done. Bone scan showed metastases in dorsal and lumbar spine. A channel TURP

Fig. 1 Urethrocutaneous fistula

Fig. 2 Healed penile wound

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was done 2 weeks later. The patient was discharged home on 4th postoperative day.

After 3 weeks of TURP, the patient was readmitted with gangrene of penis involving glans and shaft and incontinence of urine. Debridement of gangrene and suprapubic cystostomy (SPC) was done. A urethrocutaneous fistula was noted (Fig. 1). The patient was lost to follow up and turned up after two months of debridement. The penile wound had healed with secondary intention (Fig. 2). Combined urethrogram showed normal urethra. SPC was removed. The latest PSA is 0.28 ng/ml. The patient is passing urine via naturalis and under follow up for the last six months.

Discussion

TURP is a gold standard operation for benign prostatic hyperplasia (BPH). Channel TURP is done in advanced cases of CaP to improve quality of life. TURP has its own morbidity and mortality [1]. Our patient had metastatic CaP and channel TURP was done after bilateral orchidectomy. He returned after 3 weeks with gangrene of penis. We explain the whole sequence of events on following basis:

Gangrene of penis following TURP for BPH has been described only once in literature [2] and was due to traction. Our case occurred in CaP and the main cause was diathermy injury. We checked the working element and resectoscope. We found the improper insulation in the working element at the site of loop insertion. The leaking current was transmitted to resectoscope sheath. This gave rise to urethral injury. These types of diathermy injury have been described in open and laparoscopy surgery [3, 4]. Urine must have extravasated. This presented later as

urethrocutaneous fistula. Urine leakage gave rise to infection. Compromised vascularity of penis leading to gangrene due to arteriosclerosis involving internal iliac arteries has been reported [5]. Our elderly patient is likely to have ischaemia though we do not have objective evidence of internal iliac artery block. Diathermy injury to urethra, ischaemia, urinary leak and infection all four factors resulted into penile gangrene. This is substantiated by delayed presentation of penile gangrene and urethrocutaneous fistula.

Our patient did well following debridement and SPC. He is passing urine via naturalis after SPC removal and PSA is 0.28 ng/ml.

The working element was replaced after confirming the defect by the manufacturer. We recommend that insulation in working element be checked at regular interval to avoid diathermy injury.

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