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VESICOCUTANEOUS FISTULA ARISING FROM A BLADDER DIVERTICULUM

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ABSTRACT

A 55-year-old man presented with intermittent episodes of urinary leak through the left groin following an abscess drainage at that site at the age of 5 years. Since then he had been suffering from recurrent urinary tract infections and urinary leak, which used to be treated symptomatically. Intravenous urogram (IVU), voiding cystourethrogram (VCU), and cystoscopy done in our institution revealed a bladder diverticulum with a stone in situ, which was communicating with the fistulous opening located in the left groin. Diverticulectomy and excision of the fistulous tract cured the patient. A long-standing fistula arising from a bladder diverticulum at relatively distant site is of extreme rarity. Vesicocutaneous fistula from an iatrogenic injury to vesical diverticulum resulting from a groin surgery has not been reported so far.

KEY WORDS: Bladder diverticulum; vesical calculus; vesicocutaneous fistula

INTRODUCTION

Vesicocutaneous fistula is very distressing condition for the patient and has a tremendous impact on the quality of life. The constant leakage of urine results in maceration and eventual destruction of skin with ensuing infection, discomfort, and malodour. Usually the etiological factors include trauma,^[1] after irradiation for carcinoma bladder and prostate,^[2] postoperative^{[3],[4]} and vesical calculus.^[5] With proper investigations and adequate surgical treatment it can be corrected. Surgical correction is imperative as there is a risk of life-threatening complications

Department of Urology, Government Medical College, Kottayam, Kerala, India Correspondence: Dr. T. A. Kishore, Department of Urology, Medical college, Kottayam - 686006, Kerala, India E-mail: kishoreta@yahoo.com like malignancy and sepsis. Vesicocutaneous fistula from an iatrogenic injury to vesical diverticulum resulting from a groin surgery has not been reported so far.

CASE HISTORY

A 55-year-old man presented with intermittent leakage of urine from the left groin for 50 years. At the age of 5 years, he had had drainage of an abscess at that site. Following that a urinary leak ensued from the site, which ceased after 2 months. Later on the patient had similar episodes at the age of 10 and 35 years. The patient also had recurrent urinary tract infections and was febrile at the time of admission. There was no voiding difficulty. Patient was put on indwelling bladder catheter for 2 weeks resulting in the abatement of urinary leak. The patient was also treated with parenteral antibiotics. Routine urine examination and renal function teat was normal. The X-ray KUB showed a radio opaque shadow anterior to head of left femur. IVU and VCU were done which showed a communication between bladder and the cutaneous opening in the left groin [Figure 1 and 2]. Cystoscopy revealed a bladder diverticulum from the lateral aspect of the bladder, which was inflamed, rest of the bladder wall showed mild inflammation and bladder outlet was open. The irrigant fluid was leaking through the fistulous opening [Figure 3]. Exploration was done through a infraumbilical incision. The bladder was approached extraperitoneally and opened through a vertical incision in the anterior bladder wall. There was a tubular tract extending from the dome and lateral aspect of the bladder and calcified lesion near the cutaneous end. The tract was coursing anterior to iliac vessels and the opening lateral to left inguinal ring. The diverticulum and the fistulous tract were dissected out and diverticulectomy was done. Bladder was closed in two layers. Postoperatively there was no urinary leak after the removal of indwelling Foley Catheter and

normal voiding was restored. The histopathology of the diverticulum showed bladder mucosa lined by transitional cell epithelium with certain areas of squamous metaplasia. There was also evidence of nonspecific inflammation. The calcified lesion was found out to be a triple phosphate stone. As the presentation occurred at an early age and the diverticulum was large with no associate urinary pathology a diagnosis of congenital bladder diverticulum complicated by a stone was considered as a possibility and the fistula would have been caused by the drainage of abscess.



Figure 2: VCU picture of the diverticulum and the fistula



Figure 1: IVU picture of the diverticulum and cutaneous opening with stone in situ



Figure 3: Leakage of irrigant fluid through the fistula during cystoscopy

DISCUSSION

Congenital bladder diverticulum with out associated posterior urethral valve or a neurogenic bladder is rare. They usually occur lateral and cephalad to ureteric orifice. These types of diverticula are larger than those associated with secondary causes. The cause of these diverticula is an inherent weakness in the bladder musculature. Vesico-cutaneous fistula due to other etiological factors has been reported frequently. Common causes include extensive trauma with pelvic fractures,^[1] after irradiation for pelvic malignancies,[2] like radical postoperative causes hysterectomy,^[3] hip arthroplasty.^[4] There are also few cases reported as sequel to large bladder calculus.^[5] Anecdotal cases of vesicocutaneous fistula from inquinoscrotal hernia,^[6] antenatal bladder aspiration,^[7] bladder instability,^{[8} factitious,^[9] actinomycosis ^[10] have been also reported. A thorough search for the etiological factors like stones and malignancy should be made. IVU, VCU, and a cystoscopy would be useful in making the diagnosis. Other cross-sectional imaging such as CT scan and MRI is needed if the fistulous tract is complicated and malignancy cannot be ruled out with routine imaging modalities. The threat of repeated urinary tract infection and malignancy make the management of this lesion mandatory. Open surgical management with excision of the fistulous tract and interposition with myocutaneous flap is ideal for large fistulas. Extensive skin loss can be replaced by skin grafting. After a thorough search of literature we could not find any reported case of similar nature.

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