

Vesicocutaneous Fistula: A Rare Complication of Pelvic Trauma

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Abstract

Background: Vesicocutaneous fistula is a rare type of urinary fistula. It is often distressing and may negatively impact on the quality of life of an affected person. Our aim in this case report is to document a case of vesicocutaneous fistula following pelvic trauma from road traffic accident and share our experience in the management of this condition. **Case Report:** We report the case of a 30 year-old primipara who had urinary incontinence following pelvic trauma sustained from road traffic accident. Examination findings were in keeping with vesicocutaneous fistula. She subsequently had surgical repair of vesicocutaneous fistula which was successful. **Conclusion:** This case report highlights pelvic trauma as one of the causes of urinary fistula and the key role of surgery in its management.

Keywords

Vesicocutaneous Fistula, Pelvic Trauma, Road Traffic Accident, Bladder

1. Introduction

Vesicocutaneous fistula is a rare type of urinary fistula. It has tremendous impact on the quality of life as a result of continuous leakage of urine [1]. It is neither a common type of genitourinary fistula nor a common complication of road traffic accident/pelvic trauma. The most frequent causes are malignancies, trauma, inflammation and iatrogenic injury [2]. It may also result from radiotherapy [3]. It typically results in leakage of urine from the bladder through the skin.

The major modality for treatment is surgery, but an indwelling Foley catheter may be used for conservative management [1]. Conservative management may be appropriate for small fistula in which the tissues surrounding the fistula are

healthy. This complex type of fistula may require grafts or flaps during repair [4]. Surgical intervention may be necessary to close the fistula as well as prevent complications like sepsis [5].

Vesicocutaneous fistula following road traffic accident/pelvic trauma is uncommon, but this has been previously documented [6] [7]. We hereby report a case of vesicocutaneous fistula following road traffic accident/pelvic trauma and share our experience in the management of this case.

2. Case Presentation

The patient was a 30 year-old primipara with one living child who presented with involuntary leakage of urine from her perineum of 6 years duration. Her problem started following a road traffic accident. She was on a motorbike which collided with a vehicle resulting in pelvic injury. There was a positive history of temporal loss of consciousness. She had urethral catheterization which was removed after 9 days. She subsequently developed urinary incontinence and gait abnormality. There were no other significant finding or co-morbidities noted from the history. Findings on examination were hypertrophic scar on the pubic area, defect of 3 cm on the right side of the mons pubis with expansile cough impulse and right paraclitoral urine leakage. This is shown in **Figure 1**. She also had symphyseal diastasis. No urethrovaginal or vesicovaginal fistula was demonstrated.

She was then investigated. Packed cell volume was 33%, fasting blood glucose was 99 mg/dl, urinalysis was normal and other basic investigations done were within normal limits.

After counselling, she was worked up for surgery and subsequently had fistula repair under spinal anaesthesia. Fistula repair was done in lithotomy position. Auvard speculum was used to expose the vagina during surgery. The bladder



Figure 1. Demonstrating the site of the fistula.

was opened anteriorly during surgery as shown in **Figure 2**. Fistulous tract was excised and closed as shown in **Figure 3**. A tension-free transverse bladder/urethral closure was done using single layer of inverting vicryl suture. She was placed on bladder drainage for 14 days. Antibiotics and analgesics were used in the postoperative period for one week. Patient also had physiotherapy. She was thought to do pelvic floor exercise. Following surgery, patient became continent.

She was discharged on the 16th postoperative day to the clinic. Duration of follow up was for three months and patient remained continent.

3. Discussion

Vesicocutaneous fistula is a rare type of fistula. It may occur following automobile accident/pelvic trauma. As shown in this case report vesicocutaneous fistula occurred following pelvic trauma sustained from road traffic accident. Kim *et al.* and Banihani *et al.* have similarly reported vesicocutaneous fistula following

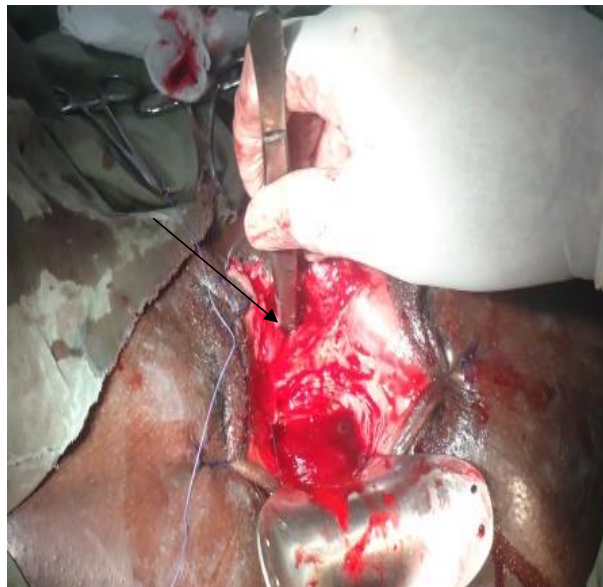


Figure 2. Opening of the anterior bladder wall with dissecting forceps inserted (arrow).



Figure 3. Closure of the defect.

automobile accident and surgery for repair of pelvic fracture associated with bladder rupture [6] [7]. Other reported causes of vesicocutaneous fistula includes iatrogenic injury to bladder diverticulum following abscess drainage, radiation injury, iatrogenic injury during caesarean section and open prostatectomy, hysterectomy and malignancy [1] [2] [3] [5] [8] [9] [10] [11].

In this case report, the diagnosis was mainly clinical. Imaging modalities such as intravenous urography, computerized tomography scan and magnetic resonance imaging may be useful in management of patients with vesicocutaneous fistula [1] [2] [5]. Failure to demonstrate vesicocutaneous fistula using imaging studies does not confirm its absence [6]. This is of particular importance in a low resource setting as this case can be effectively managed without sophisticated investigation modalities following a clinical diagnosis of this disease.

The management of vesicocutaneous fistula depends mainly on the predisposing factor and the general state of the patient [7]. Conservative management may be done using Foleys catheter [9]. Surgery is a management option for vesicocutaneous fistula [8]. As demonstrated in this case report, the patient became continent after surgical repair. If skin loss is extensive, a skin graft may be considered in the surgical management of patients with vesicocutaneous fistula [9], which was however not indicated in our index patient.

This case is of considerable interest because vesicocutaneous fistula is a rare variety of urinary fistulae. It is a possible complication of pelvic trauma following road traffic accident. This case report shows that the diagnosis of vesicocutaneous fistula can be made clinically. Authors also demonstrated the role of surgery in the management of this patient.

4. Conclusion

Vesicocutaneous fistula is a rare type of urinary fistula. It is a rare complication of pelvic trauma following road traffic accident. Its diagnosis can be made clinically. Surgery is a management option. The prognosis following surgical repair of this type of fistula appears good.

Consent

Consent was obtained from the patient for this paper and the images presented.

Conflicts of Interest

None.

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