

**Case Report**

# Vesicovaginal fistula: an uncommon complication of a perineal burn in a 12-year-old girl

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## Abstract

Perineal burns are a rare finding in children that may cause severe complications. Vesicovaginal fistulas are an uncommon complication of a perineal burn that can be a tragedy for girls suffering from them. Fistula and/or its treatment are a socially debilitating problem with significant medicolegal implications. We present a rare case of a girl with a history of traumatic perineal burns who was diagnosed with a vesicovaginal fistula and repaired through a transvaginal approach.

## Introduction

Vesicovaginal Fistula (VVF) is an abnormal communication between the bladder and the vagina. It may be located at different levels and occur most of the time in a traumatic context [1]. VVF is rare in girls. They occur most of the time during trauma. This condition has far-reaching social implications on the patients, due to the constant dribbling of urine causing wetting of clothes, the accompanying smell and the constant ostracism, humiliation and destitution [1-4]. The purpose of this observation is to present the case of a thermal burn fistula in a 12-year-old girl and to discuss the management.

## Case report

A 12-year-old girl, with a history of thermal burn to 10% of her upper extremities and perineum, was referred to our department approximately 6 months after the traumatic perineal burn, with permanent and involuntary urine loss through the vagina. Physical examination revealed maceration lesions on the external genitalia and the inner face of the thighs. There was a spontaneous and permanent loss of urine through the vagina in orthostatism. At intravenous urography, we noted opacification of the vagina by contrast and urine leakage while standing (Figure 1). At cystoscopy, the diagnosis was established by filling the bladder with a dilute solution of methylene and the fistula is 7 mm in diameter (Figure 2).

### More Information

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**Figure 1:** Intravenous urography radiography (after 15 minutes) showing the bladder filling and vagina opacification through a vesicovaginal fistula. B: Bladder, V: Vagina.



**Figure 2:** Endoscopic view showing a 7 mm vesicovaginal fistula. F: Fistula.

The cure of the fistula was performed through a transvaginal approach. We performed an incision around the fistula, followed by a dissection between the vagina and bladder. Each structure was then sutured separately (Figure 3). The postoperative course was uneventful with the satisfactory result with no micturition disorder.

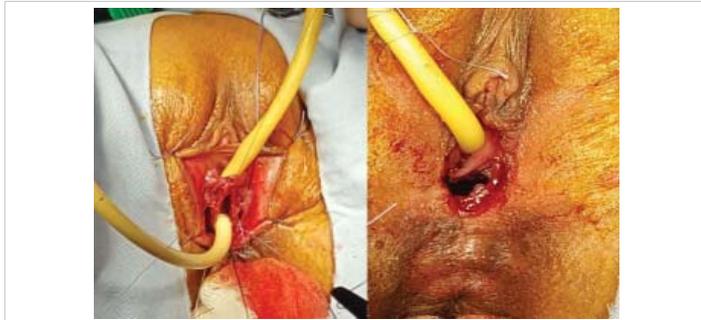


Figure 3: Pre-operative view showing dissection between bladder and vagina.

## Discussion

VVF occurs mostly in obstetric context or is iatrogenic due to surgical procedures in adults [2,3]. In girls, it often occurs in a pelvic trauma context [1]. Involuntary loss of urine in a child first evokes enuresis. When this condition is established, a traumatic etiology is a tissue [5,6]. In the case reported, the fistula was the result of a thermal burn of the perineum. Fistula and/or its treatment are serious legal and medical issues. They may have an impact on the quality of sexual life of the patient [7].

VVF identification is usually easy, but a clinical examination in a young girl may be difficult and delicate [2]. We prescribed intravenous urography to seek a possible ureteral injury and appreciate the impact on the upper urinary tract. A detailed assessment of the fistula was done under general anesthesia before performing the surgery. We have also made an intraoperative cystoscopy.

Female vesicourethral lesions are rare and their management remains a challenge. Little is known about the surgical techniques used to treat fistula in children. It is therefore logical to refer to techniques used in adult to manage this condition [1–4]. Key points are the excision of the fistula edge and the separate closure of each layer. VVF management difficulties are linked to the risk of urinary incontinence following rehabilitation due to sphincter damage [2]. The choice of surgical approach depends on the familiarity of the approach by the surgeon, the location of the fistula, available space in the vaginal cavity, the need for ancillary procedures such as ureteric reimplantation and the feasibility of obtaining necessary interposition flaps [8].

The transvaginal route for repair is preferred as it has low morbidity, higher success rates and minimal complications. Younger age and a smaller fistula size were significantly associated with successful anatomical closure [7]. In our case, the cure of the fistula was performed through a transvaginal approach. An incision around the fistula followed by dissection between the vagina and bladder. This allowed us to cure the fistula with a satisfactory postoperative result with no micturition disorder due to sphincter damage.

## Conclusion

VVF following perineal burns in girls has a direct bearing on the quality of life with physical, functional, sexual and psychological ramifications. Prompt diagnosis and timely repair are essential for the successful management of these cases. Medico-legal aspects should be always taken into account.

**Consent for publication:** The parents of the patient have consented to the use of clinical photographs for publication and the research process.

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