



## Foreign Body Intra Vesical on an Unusual Diagnostic Case in Bangui

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### Abstract

**Objective:** To report the difficulties of diagnosis in presence of an intravesical foreign body and to draw the attention of practitioners to the practices likely to lead to iatrogenesis.

**Patients and Methods:** This was an unusual clinical case diagnosed incidentally during a cystostomy indicated for bladder stones. Results: The patient is a 36-year-old lady. She is 3rd Parent whose last child is five months old. She is received in our services 5 months after a delivery which had taken place in a maternity ward in Bangui. She would have benefited from a bladder sounding just before delivery and the circumstances are not well specified. His complaints are dominated by pelvic pain, pollakiuria and urinary burning. The physical examination is normal. The urine analysis shows a urinary tract infection with *Escherichia Coli* and the blood count shows hyper leukocytosis with 14000 white elements/mm<sup>3</sup>. Medical treatment with Ciprofloxacin 500 mg/8 hours is instituted for about ten days. The persistence of the symptoms motivates the realization of an abdominopelvic ultrasound which will highlight an intra vesical calculation of approximately 3 cm in diameter. We perform a cystostomy during which we discover a rigid probe whose distal end is surrounded by a stone. After extraction of the catheter and the stone, the bladder is closed and a urethral catheter is put in place and kept for 10 days. Ceftriaxone-based antibiotic therapy is instituted for a period of five days. The postoperative course was simple.

**Conclusion:** Foreign bodies in the lower urinary tract are rare in our practice. Their frequency is probably underestimated because practitioners do not think about them or because of a lack of means of exploration. Patient safety is first and foremost about continuous improvement, through learning from mistakes and adverse events. However, the practice of sounding with small rigid probes must be carried out under good supervision in order to avoid iatrogenic detrimental to the patients.

**Keywords:** Bladder Stone; Foreign Bodies; Cystostomy; Bladder; Lower Urinary Tract

## Introduction

The presence of foreign body in the bladder raise the question of its mode of penetration [1]. In the literature, the mechanisms at the origin of the migration of an intravesical foreign body are often related to a maneuver related to a psychiatric pathology, a surgical or endoscopic iatrogenic introduction, an accidental introduction during a transvesical intervention and more rarely in gunshot wounds [2-5]. In the Central African Republic, midwives use small rigid catheters to empty the bladder of parturients in active labor. This practice is not devoid of any risk with significant consequences.

We report a case of intravesical migration of a rigid catheter complicated by bladder stones around the catheter in a young woman admitted to our department. The aim of this study was to report the difficulties of diagnosis in presence of intravesical foreign body and to draw the attention of practitioners to the practices likely to lead to iatrogenic.

## Observation

Mrs. NG C., 36 years old; mother of three children and the last delivery was five months ago. The lady barely remembers the gestures that were made to her in the delivery room. 45 minutes after being admitted to the labor room, she had already given birth. She went to the emergency room five months after giving birth for pelvic pain, pollakiuria and burning during urination that had been evolving for about two weeks. The physical examination focused on the genital and urinary system is unremarkable. The paraclinical explorations carried out showed the following.

Cytobacteriological examination of the urine revealed a ciprofloxacin-sensitive *Escherichia Coli* urinary tract infection. The complete blood count shows hyperleukocytosis with 14,000 white blood cells/mm<sup>3</sup>. Renal function is normal. No radiological exploration was performed during this first consultation. Antibiotic therapy is initiated based on Ciprofloxacin at the rate of one 500mg tablet every 8 hours for 10 days.

Given the persistence of the symptoms, which became more and more debilitating, the patient returned two weeks later in emergency where an abdomino-pelvic ultrasound performed revealed an intravesical stone approximately 3 cm in diameter. The indication for a transvesical cystolithotomy is posed and performed urgently. Exploration of the bladder cavity reveals a rigid probe

about 15 cm long, curved in the bladder around which a stone has formed at the end of the probe (Figure 1).



**Figure 1:** View of the rigid probe with the calculus formed at the distal end after extraction (Source: General Surgery Department of the Sino-Central African Friendship University Hospital in Bangui).

The extraction of the probe and the stone was done without major difficulty. The bladder wall is closed layer by layer and a urinary catheter is placed and kept for 10 days before it is removed. Antibiotic therapy based on Ceftriaxone at the rate of 1 g every 12 hours for 5 days. The postoperative course was simple with regression and disappearance of the initial functional signs.

## Discussion

The presence of an intravesical foreign body is a rare but very serious event because of the complications it can cause. These complications can range from a persistent urinary tract infection to the formation of a lithiasis around the foreign body or even intrauterine migration or uterine perforation [6]. Whatever the case, the problem which arises is that of determining the mode of penetration of the foreign body into the bladder. In the majority of cases, the introduction often takes place in a context of psychiatric illness or after an accidental or iatrogenic introduction [7]. In the case of our study, the mechanism was unknown. The hypothesis of accidental or iatrogenic introduction would be the

most plausible. Indeed, midwives are used to using rigid probes to empty the bladder of parturients in the active phase of labour. The delivery of the parturient having been very fast (45 minutes after the admission of the parturient) we can explain the midwife in wanting to take care of the child would probably have abandoned the sounding to take care of the child and the probe that eventually ended up in the bladder.

In the literature, several authors have reported the varied nature of intravesical foreign bodies [1,8].

The clinical manifestations of intravesical foreign bodies are not specific compared to those observed in our patient [7]. They relate to signs indicating urinary tract infection or irritation of the lower urinary tract such as cystalgia, pollakiuria, urinary urgency, dysuria. In our case, these signs were associated with pelvic pain. When the mechanism of introduction of the foreign body is not well known, this leads to diagnostic errors on if one does not have a means of exploration such as cystoscopy or medical imaging. In our case, the persistence of the symptoms motivated the performance of an abdominopelvic ultrasound which revealed the presence of an intravesical stone approximately 3 cm in diameter. But the final diagnosis was only made at the indicated cystostomy to extract the intravesical stone.

With regard to bladder stones, several hypotheses have attempted to explain the mechanism of lithogenesis on intravesical foreign bodies, including, among others, the imbalance between promoter and inhibitor factors of lithogenesis. The presence of the foreign body in the bladder promotes the crystallization of other chemical species.

For anatomical and hormonal reasons, bladder lithiasis in women is not usual, it is 7 to 10 times less frequent than in men. MHIRI, *et al.* [6] reported that the formation of bladder lithiasis in women is favored by a local cause which may be the migration of an intrauterine device, a foreign body, or urinary tract infection through the ureolysis [9-11].

Thus, the patient may remain asymptomatic for a long period ranging from 6 months to 16 years [12] before the onset of symptoms. In our case, the patient had remained asymptomatic for 5 months, while in some cases, the symptoms of repeated

urinary irritation can be neglected by practitioners who treat them as ordinary cystitis without imaging explorations [13]. The extraction of the foreign body can be done by endoscopic way or by a cystostomy as in our context [1,7]. The evolution is often favorable after the extraction of the foreign body.

## Conclusion

Intra-vesical foreign bodies are rare in our practice. They frequency may be underestimated because practitioners do not think about them or because of a lack of means of exploration. The use of small rigid probes to empty the bladder must be carried out under good supervision in order to avoid iatrogenic damage to patients.

## Conflict of Interest

«The authors declare that they have no links of interest».

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