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Case Report

Intravesical foreign body (a complete ball pen) - A rare case report

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Abstract :
The lower urinary tract is the recipient of a variety of foreign bodies which almost defies imagination. They include all types of objects. The frequency of such cases and the nature of objects are an important addition to the diseases of the urinary organs. Intravesical foreign bodies provide a challenge to the urologist in both diagnosis and management.

Keywords : Intravesical foreign bodies, Urinary bladder, Foreign bodies.

Introduction:

The urinary bladder can be the site of various types of foreign bodies (1), which otherwise would seem to be a more inaccessible site for introduction. They find their way in bladder by accident, iatrogenic, migration during masturbation or from neighboring organs. A rare case of a complete ball pen in the urinary bladder is reported and its unusual presentation and management are discussed.

Case History:

A 24-year-old, unmarried female presented in an emergency with a history of self insertion of ball pen into the urethra and bladder at around midnight. She disclosed that as the pen was being used for masturbation, it suddenly disappeared and went in the bladder. Since then she was having increased frequency of micturition, severe dysuria, hematuria once, suprapubic pain and incomplete evacuation of bladder.

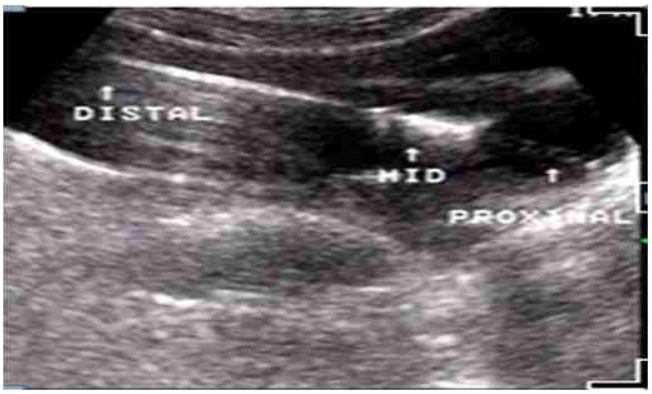
Past history revealed that she had a habit of frequent masturbation with pen & hematuria off & on.General examination revealed normal temperature, pulse, blood pressure parameters. The abdominal examination revealed palpable, tender bladder (around 3 centimeters). Rest of the abdomen was scaphoid, soft & non-tender. The local examination showed a significantly patulous external urethral meatus and absent hymen (Fig.1).

Figure 1: Patulous external urethral meatus and absent hymen

The urinary analysis showed the presence of plenty of RBCand few pus cells. Haemogram, kidney function test, blood sugar were in the normal range. The status and the nature of intravesical foreign body (IVFB)was confirmed by X-ray andultrasonography (USG) of kidney urethra and bladder (KUB). They confirmed the presence of a long, obliquely lying foreign body in the urinary bladder (Fig. 2, 3).

Figure 2:Plain radiograph pelvis AP and Lateral view: Obliquely lying linear lucent shadow with metal tip

Figure 3: Ultrasonography KUB showing a long echogenic foreignbody lying obliquely in bladder



The kidneys and the rest of the abdomen were normal. Ball pen was removed cystoscopically under general anaesthesia. In lithotomy position cystoscopy was done. External urethral meatus was significantly patulous. Bladder was distended and showed an obliquely lying Reynold's ball pen (Fig. 4) and ball point impacted in the left lateral wall (Fig.5). Rest of the bladder was normal. Subsequently, the pen was disimpacted from the bladder wall (Fig. 6).

Figure 4: Cystoscopy showing obliquely lying Reynold's ball pen

Figure 5: Cystoscopy showing pen impacted in wall

Figure 6: Cystoscopy showing disimpacted from the bladder wall

Grasping of the ball point with the biopsy forceps or stone crushing forceps was tried so as to bring it out. All the efforts were unsuccessful because the ball point frequently slipped out. After trying for 45 minutes, we thought of abandoning the endoscopic procedure and to proceed for open surgical extraction. Cystoscope was taken out and immediately the pen came out partially through the external meatus (Fig. 7) (possibly due to vertical lie of pen from dome of bladder to urethra).

Figure 7: Pen lying in urethra

Pen was grasped and removed completely (Fig. 8). Site of impaction re-visualized by cystoscopy and it showed no active bleeding (Fig. 9).
Indwelling catheter kept in bladder for 48 hours and then removed. She voided satisfactorily and discharged after 3 days.

Figure 8:Completely removed ball pen from bladder

Figure 9: Site of impaction re-visualized by cystoscopy showing no active bleedi

Discussion:

Foreign body lodged in the body orifices is not unusual and the incidence is increasing. French et al reported an increase with respect to rectal foreign bodies (2). The urinary bladder, however, would seem a more inaccessible site for the introduction of foreign bodies.
In view of the above, our case report is quite rare, where a complete ball pen as gone in the bladder. The possible explanation is, because the patient gave the history of frequent masturbation with pen resulting into patulous urethra which allowed the sudden and complete self insertion into bladder (during masturbation).
The diagnosis was easy based on exact history, X-ray and USG of kidney urethra and bladder. The radiological investigations corroborated with the history and showed the IVFB consistent with the ball pen.

The problem we had was how to inform the parents about the diagnosis, the necessity of emergency procedure and consent. The patient had initially told us not to explain anything about the pen and associated events to her parents and relatives (for obvious reasons). She herself was convinced about the necessity of emergency procedure and gave the consent. But, because parents knew nothing, it was difficult for us to convince them about the diagnosis and the necessity emergency procedure. After some perseverance, the patient relented and confided everything to her mother, then consent was given and the procedure was done.
The Classification of IVFB based on method of deposition in bladder is(1):

Self-inserted – Sexual gratification, pediatric, psychiatric, senility, drug Intoxication

Iatrogenic – Bladder drainage, bladder surgery, adjacent surgery

Migratory – Uterus, rectum, vagina, penetrating trauma, and migration could be of intrauterine device (IUD), appendicoliths, perforated enteric foreign body, surgical sponges, and bone fragments from hip and pelvic bones.

Foreign bodies presenting acutely(1):

Object	Mode of introduction
Hair grip	Eroticism with partner
Match stick	Eroticism with partner
Drinking straw	Erotic games
Pipe cleaner	Attempted clearance of urethral blockage
2.5 cm nail	Psychiatric disturbance
Piece of string	Psychiatric disturbance
Cotton bud	Self hygiene.

Object	Time interval	Mode of Presentation
Catheter tip	5 years	Recurrent urinary
Abdominalpain		tract infection (UTI),
Pipe cleaner (Calcified)	7 years	Recurrent UTI
Calcified stitch after Stamey procedure	18 months	Recurrent UTI
IUD	9 years	Recurrent UTI, Chronic abdominal pain
Suprapubic catheter tip	6 months	Recurrent UTI

Myriad of foreign bodies are mentioned in the literature like light bulbs, plastic beans (3), thermometer(4), wax candle(5), wrist watch, insects, snakes (decapitated), worms, squirrel tails, French fried potato, tooth brush(6), crayons, shoelace, chewing gum mould.
The diagnosis is based on history of self-admission, alcoholism, drug addiction, psychiatric disturbances, previous bladder / pelvic surgery, symptomatology and also supported by examination and investigations like X- ray, USG, computed tomography (CT)and cystoscopy.

The principles of management are:

1) Aimed at complete extraction of foreign body with minimal trauma to bladder and urethra.
2) Prevention.
Majority can be treated with transurethral extraction, but a few would require suprapubic cystostomy (7) or perineal urethrostomy. Occasionally foreign body is voided spontaneously e.g. Bullets (8). Some innovative procedures are described in literature likepercutaneous instruments, Fogarty catheter, Magnetic retrievers for galvanic objects (9), air insufflation of bladder (10).

Preventive measures include use of absorbable sutures in bladder surgery, routine examination of all catheters after removal and if incomplete to check with cystoscopy, and psychiatric evaluation in relevant cases. IVFB are prone for complications like bladder perforation, pelvic abscess, fistula, chronic irritation, chronic sepsis and carcinogenesis.

Conclusion:

There is a noticeable increase in incidence of foreign bodies lodged in body orifices (more in rectum than urinary bladder).IVFB provide a challenge to the urologist in both the diagnosis and management.

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