Transperineal migration of a portion of a writing pen into the urinary bladder

Sir,

The constellation of solid intravesical foreign bodies reported in the medical literature mostly involves adults.[1,2] Despite the relative inaccessibility of the urinary bladder, these objects are either self-introduced for varying reasons or these inadvertently enter the bladder following surgical intervention or, occasionally, migrate from adjacent structures.[1-3] In most cases, the clinical presentation is related to bladder irritation and may vary from long-term dysuria and recurrent urinary infection to haematuria, or a combination of these.[2,4] High index of suspicion of this and thorough diagnostic work-up have been emphasised, especially in children, to ensure timely diagnosis and treatment.[5]

This case report describes our experience with the management of an intravesical foreign body that followed perineal impalement injury.

A 13-year-old boy presented with a 4-month history of intermittent perineal pain, dysuria, urgency and recurrent febrile episodes. One month earlier, he was the victim of a prank by a schoolmate. He inadvertently sat down on a writing pen set vertically on his seat by the classmate. The pen penetrated the perineum and he was managed at a local primary health facility by "removal" of the impaled pen and local wound care. Following the incident, he had intermittent haematuria for a period of 2 weeks, but there was no drainage of urine from the perineal wound. For the above symptoms, he was managed at the primary health facility with analgesics and antibiotics and was referred when there was no appreciable improvement.

Clinical examination was significant for a perineal scar [Figure 1], tenderness at the bladder neck on digital rectal examination and absence of palpable mass at the perineum or pelvis.

Pelvic radiograph revealed a radio-opaque material akin to a pen tip in the pelvis [Figure 2]. Pelvic sonogram showed elongated foreign body in the bladder cavity with evidence of cystitis. Laboratory investigation

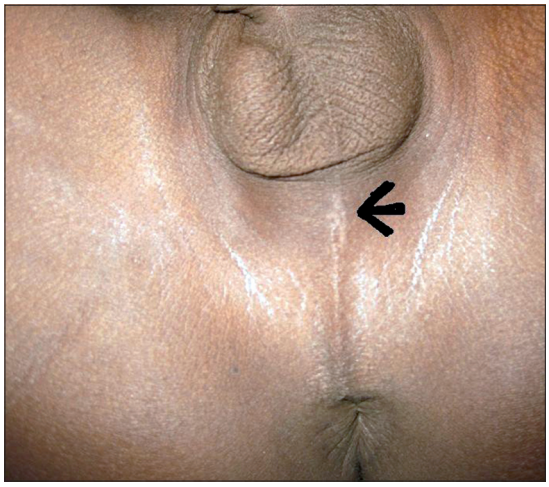


Figure 1: The perineum of the patient on presentation. The arrow points to the healed entry point of the perineal wound.



Figure 2: Pelvic radiograph of the index patient showing the radio-opaque end of a writing pen in the pelvis. In cases where part of the foreign body is not radio-opaque, this type of imaging will not give accurate estimation of the size of the object

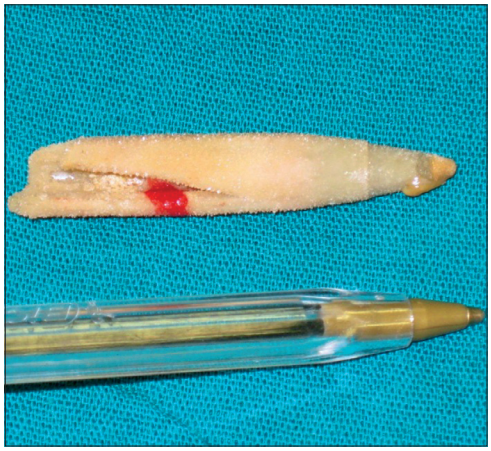


Figure 3: The encrusted fragment of a writing pen extracted from the bladder compared with another writing pen.

revealed haemogram of 11.5 g/dl, microscopic haematuria, numerous white blood cells in the urine and a negative urine culture. Urethrocystoscopy was not carried out because an appropriate-sized cystoscope was not available.

At suprapubic cystostomy, the bladder mucosa was found to be hyperaemic and a 7.5 cm encrusted fragment of a writing pen was extracted from the bladder cavity [Figure 3]. The bladder was irrigated with normal saline and closed in layers after a urethral catheter was inserted for continuous drainage. Post-operative period was uneventful. The urethral catheter was removed on post-operative day 5 and he was discharged on day 7.

He has remained asymptomatic 3 months after surgery and a repeat pelvic sonogram showed resolution of the inflammatory bladder mucosal changes.

Foreign bodies may find their way into the urinary bladder by deliberate introduction through the urethra, migration from the neighbouring organs or accidentally during therapeutic intervention in the urinary tract.[2-4] The fragment of a writing pen extracted in our patient may have penetrated directly into the bladder. Once in the bladder cavity, the object may assume transverse position and prevent its extrusion during micturation.

The initial management of the patient at the time of injury was inadequate and may reflect the lack of trained personnel and facilities that is incumbent in many hospitals in some developing countries. Prompt referral to a tertiary healthcare facility following the injury would have obviated most of the problems encountered in the index patient. He would have benefited from evaluation under anaesthesia, wound exploration with possible complete removal of the impaled pen, wound irrigation and layered closure. Urethrocystoscopy performed after this would have been invaluable.

The presentation of the patient was typical of bladder irritation by a foreign body, but the unwary would have been misled by the history of removal of the impaled pen and the healed perineal wound. It is therefore imperative to thoroughly evaluate children presenting with chronic lower tract symptoms in order to exclude intravesical foreign body among other pathologies. Such investigation may include urethrocystoscopy, contrast lower urinary tract examinations, pelvic sonogram, pelvic radiograph and urine examinations.[4,6] In some developing countries where the facilities and trained personnel for all these may not be readily available, pelvic radiograph and sonogram may help clinch the diagnosis. It is pertinent to determine the actual size of the object as this may influence the definitive treatment modality.

The objective of treatment in intravesical foreign body is the removal of the object with minimum trauma. This can best be achieved by endoscopy either through the urethra or via percutaneous cystostomy.[1,4,7] However, in situations where the object is large and endoscopic removal is not possible or cystoscope is not available, as in our case, removal can be carried out through open suprapubic cystostomy.

The outcome of treatment of intravesical foreign body is reported to be excellent.[1,2,4,7] The inflammatory changes in the bladder usually subside following extraction of the foreign body. This was evident in the index case.

Perineal impalement injuries in children can result

in intravesical foreign body if not properly managed. Residual intravesical foreign body in such children should be suspected in cases with chronic lower urinary tract symptoms. Diligent evaluation and treatment will result in excellent outcome.

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