

Delayed Ureteral Obstruction Following Gunshot Pellet Migration

A 42-year-old man presented with a three-day history of acute left-sided loin pain five months after an abdominal gunshot injury. Following his initial presentation, he required an exploratory laparotomy, gastric oversew, and transverse colon repair, but was still known to have multiple remaining intra-abdominal pellets (Figure 1). He had no previous urological history, but urinalysis on admission revealed microscopic hematuria. Renal function was normal, but his C-reactive protein was increased at 38 mg/L (normal value <10 mg/L). A non-contrast computed tomography revealed one pellet had migrated into the left ureter causing ureteral obstruction and hydronephrosis (Figure 1).

Initial management involved decompression of an infected system with a percutaneous nephrostomy followed by an antegrade pyelogram (Figures 2 and 3). Definitive management was scheduled and involved delayed ureteroscopy and extraction of the pellet under general anesthesia. The pellet was extracted with forceps, and a ureteral stent was inserted for a period of four weeks due to the nature of the foreign body and to permit ureteral healing. There were no complications during the procedure or during the urological follow-up of the patient.

Ureteral obstruction caused by a foreign body is uncommon.^(1,2) When suspected, it is usually an indwelling ureteral stent;⁽¹⁾ however, rarer causes, such as shotgun pellets and bullets, have been described.⁽²⁾ In previous reports of shotgun pellets causing ureteral obstruction, the pellets have passed spontaneously without the need for further intervention.⁽¹⁻³⁾ This case highlights the multidisciplinary approach to the management of ureteral foreign bodies due to gunshot injuries, and the fact that migration of embedded pellets can involve the urological tract several months after the initial injury.

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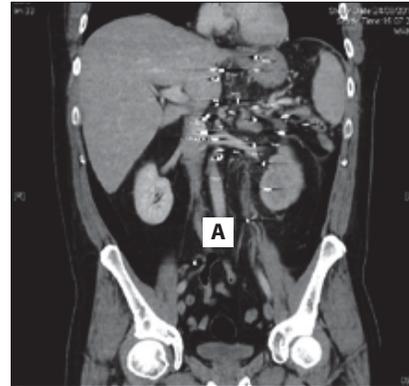


Figure 1. Computed tomography scan showing multiple intra-abdominal radio-opaque pellets and a proximal ureteral pellet causing obstruction with peri-ureteral and renal fat stranding (A).



Figure 2. Plain abdominal x-ray showing radio-opaque pellets and indwelling left nephrostomy (B).



Figure 3. Antegrade pyelogram showing a proximal obstructing left ureteral pellet (C).

REFERENCES

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