SPONTANEOUS URINOMA FROM MILDLY RAISED INTRA-ABDOMINAL PRESSURE: A CASE REPORT

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ABSTRACT In patients with predisposing conditions, minimal increases in intrabdominal pressure may be enough to rupture the renal collecting system and cause spontaneous urinomas. We present the rare case of a 44-year-old man with IgA nephropathy who developed a urinoma secondary to mildly raised intra-abdominal pressures from defecation.

KEYWORDS Spontaneous urinoma, pelviureteric rupture

Introduction

Urinomas are retroperitoneal collections of urine that develop following rupture of the renal collecting system. Ruptures are commonly caused by trauma, surgical procedures, or obstruction. Obstruction can be secondary to urolithiasis; mass effects from pregnancy, iliac artery aneurysms, retroperitoneal fibrosis and aortic aneurysm; local malignancies of the prostate, bladder, ureter, cervix, rectum, and appendix; and disseminated malignancies like lymphoma. We present a rare case of a pelvic ureteric junction (PUJ) rupture secondary to raised intra-abdominal pressures during defecation.

Case report

A 44-year-old male presented with sudden severe right lower quadrant pain while opening his bowels. His background was significant for biopsy-proven IgA nephropathy, paroxysmal atrial fibrillation with pathway ablation, thalassemia minor, and pseudogout. He had previously had a laparoscopic appendicectomy. He did not smoke or drink. He denied any trauma. He denied urinary symptoms. He was afebrile, and his vitals were normal, but he looked pale and unwell, with right lower quadrant and flank tenderness. He was not peritonitic. A CT scan revealed a large right perinephric collection, suggesting a urinoma (Fig 1). He had mildly raised inflammatory markers (WCC 13.6 x 10^9/L, CRP <2 mg/dL), normal lactate, and a stable creatinine of 285 µmol/L (baseline 270 µmol/L). His urine was clear. His pain remained difficult to control on IV opioid analgesia.

A subsequent CT intravenous pyelogram confirmed an active contrast leak from the renal pelvis without any signs of renal calculi or hydroureter (Fig 2). An indwelling catheter was inserted. He developed low-grade temperatures, and intravenous augmentin was started. He was taken to the theatre for ureteroscopy and insertion of a double J ureteric stent. An on-table retrograde pyelogram did not show evidence of stones or leak.

His pain improved dramatically after stent insertion. However, a repeat CT four days later showed improvement of the urinoma (Fig 3), and he was sent home. The stent was removed uneventfully six weeks later.

Discussion

Although rare, urinomas can be caused by minimal increases in intra-abdominal and intra-renal pressures. Rupture usually occurs at the thinner walls of the renal fornices when intra-renal pressures exceed 25 – 75 mmHg. Cases of spontaneous rupture have been reported in cases following administration of IV contrast with a full bladder and chronic urinary retention. In addition, bilateral atraumatic urinomas have been reported in patients with predisposing conditions like connective tissue disorders and inflammatory disorders like nephritis.

We present the first case of spontaneous urinoma secondary to increased intraabdominal pressures during defecation. It is unlikely that our patient’s urinoma was caused by obstruction, as there was no evidence of hydroureter or renal calculi. Instead, chronic inflammation from IgA nephropathy may have further weakened the walls of his renal collecting system and predisposed them to rupture.
Fig 1 – Noncontrast CT abdomen (a) axial, (b) coronal, and (c) sagittal showing rupture of the right PUJ and associated right perinephric collection.

Fig 2 – CT IV pyelogram (a) axial, (b) coronal, (c) sagittal planes, and (d) delayed phase showing active leak of contrast.

Fig 3 – Follow-up non-contrast CT abdomen showing resolution of urinoma in (a) axial, (b) coronal, and (c) sagittal planes four days after placement of the ureteric stent.

As in our case, patients with spontaneous urinomas can present as acute abdomen. In patients with large symptomatic urinomas, insertion of a ureteric stent seems to relieve symptoms, even in the absence of an active leak. Small or asymptomatic urinomas may resolve spontaneously (1, 16).

Conclusion

We describe the first reported case of spontaneous urinoma secondary to raised intraabdominal pressures during defecation in a patient with IgA nephropathy.

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Conflict of interest

There are no conflicts of interest to declare by any of the authors of this study.

References


