



# Spontaneous Kidney Mass Presenting as Acute Abdomen

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## Case

A 46-year-old male presented to the emergency department with chief complaints of severe, sudden-onset abdominal pain and inability to void urine.

## History of Present Illness

The patient claimed that the symptoms began several hours prior to presentation when he was trying to pass urine and that the pain initially began as right-sided but became bilateral. He denied previously seeing any blood in the urine or any other changes in urine color or character. A review of systems was positive for nausea and “feeling constipated.” His past medical history was not significant for any renal diagnoses and the patient claimed to have not seen a physician in fifteen years. On presentation, he was hypertensive at 239/146 mmHg (MAP 184) and demonstrated abdominal rebounding and guarding on physical exam. A CT scan was performed to evaluate abdominal pathologies.

**Challenge** Identify the pathology demonstrated on the sagittal and coronal CT scans shown to the right.

## Differential Diagnoses

- Hydronephrosis
- Malignancy
- Urinoma
- Nephrolithiasis



## Discussion

A urinoma is a collection of extravasated urine contained by the renal capsule. It is caused by urinary obstruction in the setting of renal trauma, abdominal surgery, malignancy, congenital anomalies, or other spontaneous causes.<sup>1</sup> The presentation of urinomas can range clinically from asymptomatic to symptoms of acute abdomen.<sup>2</sup>

The computed tomography imaging revealed a massively hydronephrotic kidney with forniceal rupture consistent with a urinoma. This image reveals a cystic mass in the right retroperitoneum measuring 22 x 17 x 24 cm. Renal neoplasm was ruled out as no distinct renal masses nor lymphadenopathy were appreciated.

Given the patient's lack of intraabdominal malignancy, lack of recent surgical or traumatic events, and no history of prior urinary obstructive symptoms, it is believed that this urinoma was secondary to spontaneous obstruction at the ureteropelvic junction.

Urology was consulted, who decided that no surgical intervention was necessary, and placement of a nephrostomy drain for decompression by interventional radiology the next morning was planned.

The following day, the patient had mild relief after fluid restriction, and pain interventions, and had evacuated 400 milliliters of normal-appearing urine overnight before drain placement. He immediately evacuated 1,800 milliliters of blood-tinged urine at the time of nephrostomy drain placement.

The patient reported continued improvement of symptoms following drain

placement, evacuating an additional 190 milliliters of urine in the next 48 hours while fluid restriction measures continued. He was discharged from the hospital on his third day.



**Figures.** Coronal and sagittal views of a cystic mass in the right retroperitoneum demonstrating a urinoma suspected to be caused by a spontaneous obstruction of the ureteropelvic junction.

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**References**

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