



A CASE REPORT OF SPONTANEOUS RUPTURE OF URETER

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ABSTRACT

The leakage of urine from the ureter without trauma or other manipulation known as spontaneous ureteral rupture. Only a few occurrences of this uncommon urological condition have been reported. Here, we are presenting an unusual instance of a patient who arrived to our emergency department with fever and flank pain. Intravenous contrast computed tomography (CT) was done to diagnose the disease. CT scan showing spontaneous rupture of ureter with renal calculus. The patient received IV broad-spectrum antibiotic treatment and double-J stent. Although rare, emergency physicians need to be aware of this disorder because it frequently manifests as an acute abdominal ailment and can be mistaken for another ailment that needs surgery.

KEYWORDS :

INTRODUCTION

The nontraumatic release of urine from the ureter is known as spontaneous ureteral rupture. It is an uncommon ailment that may be an emergency in urology (1,2). We are reporting a uncommon instance of a patient who developed urinoma as a result of spontaneous ureteral rupture. Despite being rare, emergency physicians need to be aware of this disorder because it frequently manifests as an acute abdominal ailment and can be mistaken for diverticulitis or acute appendicitis.

Case Report

A 85 year old man presented to emergency department with complaints of right loin pain, fever, nausea, 2 episodes of vomiting, dysuria and increased frequency of urination from last 2 days. Flank pain was moderate and colicky in nature. Patient has no history of previous urological disease and any urological intervention. On examination patient conscious and oriented. Pulse 88/min, blood pressure 134/86 mm g and temperature 39.5 degree. Per abdomen soft no palpable lump. Right costo-vertebral angle tenderness present with mild tenderness in right lumbar region present. Bowel sound present and shifting dullness absent. Laboratory evaluation showing haemoglobin-12.3 mg/dl and total leucocyte count 18700. Blood urea and serum creatinine normal. Other routine blood investigations within normal limit. Urine analysis shows 8-9 leucocytes and no erythrocytes per field.

USG abdomen done showing calculus in right renal calculus and right periureteric hypo echoic collection. CT urography done. Plain CT showing right renal radio dense shadow in mid and lower pole and pelvis of kidney with hypo dense collection around upper ureter. Intravenous contrast given showing prompt uptake and excretion of contrast in both kidneys. In delayed phase extravasation of contrast around right upper ureter without distal ureteric obstruction due to calculus, stricture or tumor. Based on CT urogram finding we had diagnosed as right upper ureteral rupture with right renal calculus.

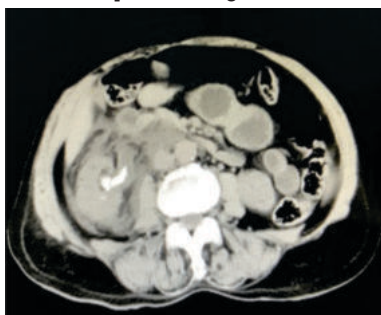


Fig-1 Showing Renal Pelvis Calculus With Periureteric Urinoma

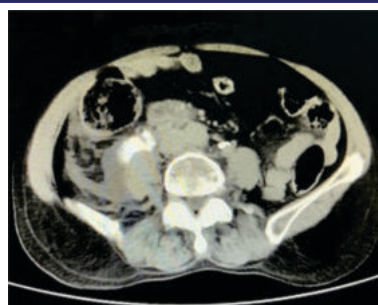


Fig 2- Showing Ureter With Contrast Material And Peri Ureteric Contrast Extravasation

DISCUSSION

Calculus diseases are the furthestmost common cause of both pelvic and ureteral ruptures, while spontaneous ureteral rupture is an uncommon occurrence. Congenital anomalies, abdominal tumours, retroperitoneal fibrosis, pelvic tumors, iatrogenic and post radiation strictures, kidney transplant, are additional reasons of obstruction in collecting system that might result in rupture. There are two hypothesis first impacted Urinary stone can first lead to ureteral wall erosion, which directly and immediately causes ureteral rupture(5, 6). Second, ureteral trauma leads to ulceration could result from the calculus moving lower and obstructing the distal ureter. This would raise the intraureteric pressure, which would then cause ureteral break at the feeblest spot (5, 6).

Patient present with sudden onset of acute flank pain/ abdominal pain, frequently accompanied by nausea, vomiting, dysuria, increased frequency of urination, and hematuria, in case of spontaneous ureteral rupture. Typically, a urinalysis will show hematuria and pyuria. Peritoneal discomfort can result from urine extravasation that happens near the peritoneum(5). Physical examination may reveal ipsilateral costovertebral angle tenderness along with stomach pain and tenderness.

Nonspecific symptoms can make diagnosis challenging. Diverticulitis, cholecystitis, appendicitis, urinary lithiasis, and other potential causes of stomach pain are examples of differential diagnoses. Ureteral rupture can cause chemical peritoneal irritation that resembles diverticulitis(8). and appendicitis, and it frequently manifests as gastrointestinal symptoms near the peritoneum(8,9).

It is essential to differentiate spontaneous ureteral rupture from forniceal rupture. forniceal rupture is more common than ureteral rupture. Due to increase in intra-pelvic pressure,

forniceal rupture takes place by a microscopic rip in the caliceal fornix. Like wise spontaneous ureteral rupture, the most frequent cause is a calculus. While non visualization of the ureter on the affected side is typically symptomatic of a ureteral rupture, the presence of a contrast nearby the calyx is strongly indicative of a forniceal rupture(10).

It is not unusual to misdiagnose ureteral rupture as diverticulitis or severe appendicitis. Half of the eight spontaneous ureteral rupture patients that Trapnell⁶ examined had an initial diagnosis of severe abdominal diseases such acute appendicitis. Nine of the 34 patients with spontaneous urine extravasation whom Diamond and Marshall,⁽¹¹⁾ evaluated underwent exploratory laparotomy to treat acute abdominal problems.

The gold standard for ureteral rupture diagnosis used to be an intravenous CT urogram. A affordable and radiation-free diagnostic method is ultrasound. When utilized in the emergency room, it is convenient and time-saving. Ultrasonography is a useful detection technique in ureteral rupture cases because, in addition to ruling out other abdominal illnesses, it reveals the existence of hydronephrosis and a modest amount of fluid accumulated in the perirenal, pararenal, and retroperitoneal areas.

There is no gender predominance among the 42-year-old average age of reported ureteral rupture patients.¹¹. Nine men and nine women, with a median age of 59 years (range: 22–82 years), participated in one study. Of these, ureteral stricture accounted for 17% of ruptures and ureteral stones for 56% of patients. Twenty-two percent of the remaining patients had no discernible symptoms, and one patient had a ureteral malignancy. reason. Triple-J stenting and primary ureteroscopy were used to treat 13 of the 18 patients (72.2%).

The most frequent cause of spontaneous ureteral rupture is ureteric stones. The majority of patients underwent double-J stenting and ureteroscopy. Antibiotics used under conservative management can also be beneficial. The majority of patients have flank or stomach pain that starts suddenly. When a patient arrives at the emergency room with flank discomfort, spontaneous ureteral rupture would also be taken into consideration as diagnosis.⁽¹³⁾.

Summary

Although rare, spontaneous ureteral rupture frequently manifests as an acute abdomen and may be mistaken for diverticulitis or acute appendicitis. Patients suspected of having this illness should have an abdominal CT scan to prevent misdiagnosis and unnecessary surgery.

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