Urinary ascites

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ABSTRACT

A middle-aged male presented with abdominal pain and ascites following a fall in alcoholic intoxicated state. Evaluation revealed microscopic hematuria and severe renal failure. Ascitic fluid analysis showed high urea and creatinine values suggesting it to be a urinary ascites. Retrograde cystography confirmed intraperitoneal bladder rupture. Following continuous bladder drainage ascites subsided and serum creatinine has reduced to 3 mg/dL. This case report highlights the importance of ascitic fluid analysis as a pointer to diagnose urinary ascites secondary to intraperitoneal bladder rupture.

Key words: Urinary ascites, bladder rupture, intraperitoneal

Introduction

Spontaneous or traumatic intraperitoneal bladder rupture is rare. Sudden onset of abdominal discomfort, ascites, ileus, hematuria, oliguria with elevated renal parameters should prompt the diagnosis. Sometimes there is a delay in diagnosis as the features may be mistaken for intrinsic renal disease. We describe one such case and the importance of the ascitic fluid analysis as a diagnostic tool.

Case Report

A 35-year-old male had a fall following alcoholic intoxication 15 days ago. Immediately he developed abdominal pain for which he received symptomatic treatment elsewhere. He was apparently well for a week. Subsequently in another hospital he was suspected to have chronic alcoholic liver disease and had ascitic tap twice for progressive abdominal distension. There he was found to have progressive azotemia and hence referred to us. At admission he had dehydration, hypertension, ascites, oliguria (100 ml), microscopic hematuria, advanced azotemia (urea: 192 mg/dL, creatinine: 8.9 mg/dL), and single normal right kidney by ultrasound. A decade ago, he underwent left-sided nephrectomy, no details of which were forthcoming. In light of the above findings the possibility of intrinsic renal disease with failure was considered and was given dialysis twice. Despite dialytic support, there was a rapid rise in serum creatinine and urea with no suggestion of a hyper catabolic state. This made us to send ascitic fluid for urea and creatinine estimation. They were high (urea 303 and creatinine 26.5 mg/dL as against 237 and 9.5 mg/dL in serum) suggesting urinary ascites and retrograde cystography confirmed intraperitoneal bladder rupture. Following urologist's advise, continuous bladder drainage was established which drained 11 L of fluid on the same day and creatinine rapidly came down from 9.5 to 3.0 mg/dL. He was discharged with catheter *in situ* after normalization of biochemical markers. He was lost to follow up subsequently.

Discussion

Bladder injuries after blunt or penetrating trauma are rare, owing to its protected anatomical position.[1] Non traumatic bladder rupture is even more rare, as cited in the large series by Bastable, *et al*.[2] The majority of them were due to bladder pathology or as a complication of distended bladder and a few were related to alcohol intoxication.

In the intoxicated, diuresis and impaired sensorium, removing the instinct to void can lead to over distension of the bladder. As bladder expands the dome becomes

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thinner and offers least resistance to a sudden change intravesical or intra-abdominal pressure.[3,4] In our patient, the trivial injury he sustained would have precipitated the rupture.

The diagnosis of this rare condition is difficult. Patients commonly present with lower abdominal pain, suprapubic tenderness and inability to pass urine, abdominal distension with features of ascites or ileus and profound azotemia. Azotemia is not due to renal failure but due to reverse auto dialysis across the peritoneal membrane following an intraperitoneal rupture of the bladder with urinary leak. This can be seen within 24 h of rupture. Analysis of the ascitic fluid demonstrating elevated urea and creatinine levels alerts the clinician to the possibility of urinary ascites and cystography usually clinches the diagnosis.

In summary, we report a case of intraperitoneal bladder rupture in an intoxicated after trivial trauma, to highlight its rarity and to appraise that the urinary ascites should always be considered in intoxicated patients with sudden onset ascites, ileus, hematuria, and azotemia.

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