

Spontaneous bladder rupture: the images before and after

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Abstract

Nontraumatic bladder rupture is a rare cause of abdominal pain. We presented a case of spontaneous bladder rupture following acute cystitis.

Clinical Image

Spontaneous bladder rupture: the images before and after

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Key words: spontaneous bladder rupture, acute cystitis, bladder diverticulum,

CT scan, retrograde cystography

Key Clinical Message

For patients with worsened abdominal pain following acute cystitis, we should consider the complication of bladder rupture. A CT scan is a useful first-line modality when evaluating for a suspected bladder rupture.

A 50-year-old woman, taking prednisolone for 20 years to her autoimmune hepatitis, presented with suprapubic pain during urination. She was diagnosed as acute cystitis based on pyuria and bacteriuria. Her initial CT scan showed bladder diverticulum (**Figure 1A**). Next day, she was admitted to our hospital because of worsened symptom despite of antibiotic therapy. Physical examination revealed suprapubic tenderness with guarding. Laboratory findings showed elevated inflammation markers and serum creatinine level. Repeated CT scan showed the fluid collection in anteroventral portion of the bladder with thickening of pelvic peritoneum (**Figure 1B**). Her retrograde cystography revealed contrast material moving outside the bladder into extraperitoneal space (**Figure 1C**). Perforation site of the diverticulum was not evident by

cystoscopy. She was diagnosed as spontaneous extraperitoneal bladder rupture, which led to pelvic peritonitis and pseudo-renal failure due to creatinine reabsorption across the peritoneal membrane. The insertion of urethral catheter improved her symptom dramatically.

Pathological bladder wall fragility and increased intra-bladder pressure are recognized as risk factors for nontraumatic bladder rupture. In our case, sequential CT images suggested excessive bladder retention caused by acute cystitis provoked bladder rupture on the background of bladder-wall fragility due to long-term steroid use[1] and/or diverticulum.[2]

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None.

Conflict of Interest

None declared.

Author Contributions

MO: drafted the manuscript. TO, KO and KS: supervised it. All authors read and approved the final manuscript.

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Figure Legend

Figure 1

A, Initial CT scan showed bladder diverticulum (arrow) and thickened bladder wall with stranding in the surrounding fat.

B, Repeated CT scan showed fluid collection in anteroventral portion of the bladder (asterisk) with thickening of pelvic peritoneum (arrows).

C, Retrograde cystography showed contrast material moving outside the bladder (arrows).

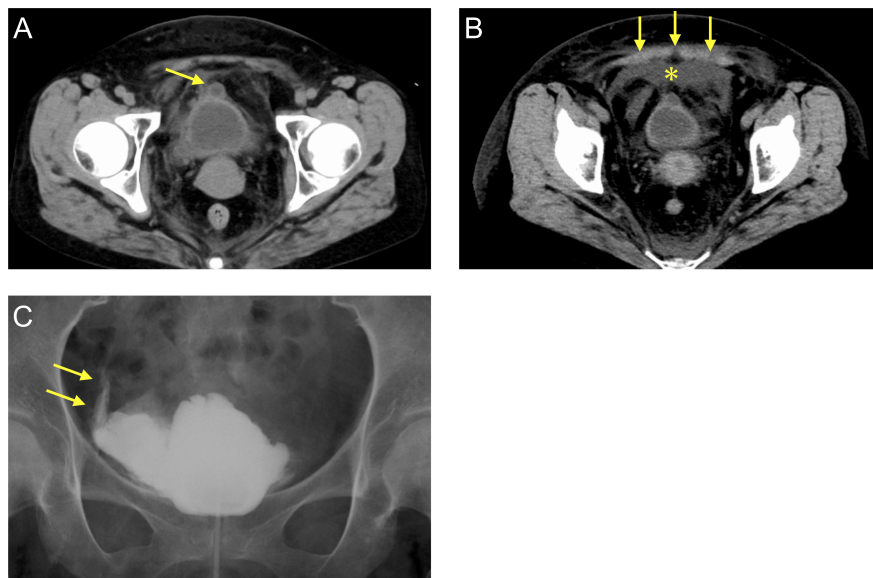


Figure 1