81 y/o male with abdominal pain s/p cystoscopy

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Axial CT Cystogram





Axial CT Cystogram





Axial CT Cystogram





Coronal CT Cystogram







Intra- and extraperitoneal bladder rupture





Axial CT Cystogram: At the mid pelvis, contrast is seen extravasating into the left paracolic gutter, indicating an intraperitoneal component.

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Axial CT Cystogram: Lower down, perivesical contrast is seen. Foley catheter is present within the bladder.





Axial CT Cystogram: Contrast extravasation localized around the right ureterovesical junction.





Coronal CT Cystogram: Perivesical contrast around the dome of the bladder (blue arrow). Contrast is also demonstrated in the left paracolic gutter, indicating an intraperitoneal component (green arrow).





Sagittal CT Cystogram: Defect in the bladder dome (yellow arrow) with perivesical contrast.



Bladder Rupture

Imaging Features

- Intraperitoneal rupture
 - Contrast extravasates into the paracolic gutters and outlines loops of bowel.
 - Layering of contrast in dependent areas (Pouch of Douglas, Morrison's Pouch)
 - Look for bladder dome defect

Extraperitoneal Rupture

- Extravasation into extraperitoneal spaces, most commonly the retropubic space of Retzius
- May see contrast extravasation into the anterior abdominal wall, thigh, and scrotum



Bladder Rupture

General Features

- Extraperitoneal
 - 62% of all bladder ruptures
 - Usually secondary to pelvic fracture; fragment lacerates the base of the bladder.
 - Treatment is usually medical management with Abx and catheterization

Intraperitoneal

- 25% of bladder ruptures
- Trauma to abdomen with full bladder
- May mimic acute renal failure
- Treatment requires surgery to repair bladder dome
- Combined
 - 12% of ruptures
 - Findings of both intraperitoneal and extraperitoneal ruptures



References

- 1. Brant, W. E., & Helms, C. A. (2012). *Fundamentals of diagnostic radiology*. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins
- Diagnostic Imaging for Radiology. (n.d.). Retrieved November, 4, 2017, from http://www.statdx.com/

