61-year-old male presents with bilateral flank pain.

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Acute pyelonephritis (in setting of prior cystectomy with RLQ ileal conduit)
Wedge-shaped area of parenchymal hypoenhancement with ill-defined margins
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Absence of urinary bladder s/p cystectomy
RLQ ileal conduit
Acute pyelonephritis

Acute infection of renal parenchyma

• Clinical presentation:
  – Fever, flank pain, CVA tenderness, nausea, vomiting, dysuria.
• Imaging is insensitive, but fairly specific in the appropriate clinical context.
  – On CT, can see wedge-shaped or rounded areas of parenchymal hypoenhancement with perinephric stranding/inflammation. “Striated nephrogram”.
    • Best appreciated on nephrographic or excretory phase.
• DDx:
  – Renal infarction
    • Sharply defined wedge-shaped area of absent enhancement
    • May see cortical rim sign (enhancement along periphery from capsular arterial supply)
  – Renal cell carcinoma
  – Renal lymphoma
  – Vasculitis
• Complications:
  – Renal abscess, perirenal abscess, renal scarring, end-stage renal disease
Cystectomy with ileal conduit

Increased risk for UTI and pyelonephritis

- Results in increased urinary stasis allowing for bacterial growth and easier ascension of colonized urine.
- Atypical bacteria more common in this setting.
  - Urine culture in this case grew Klebsiella pneumoniae (<20% frequency) and Morganella morganii (rare, gram-negative rod).
References


3. Statdx.com