Introduction

Emphysematous cystitis is a rare urinary tract infection caused by gas-producing bacteria within the bladder wall and lumen. Clinical symptoms vary leading to a challenging diagnosis with the ability to progress quickly to septic shock and death. Necrotizing Emphysematous cystitis even rarer.

Case Presentation

68 year old African male found down by EMS, last well 1 week prior.
- No known past medical or family history.
- Cachectic, AMS, tachycardia, hypotension improved with fluids.
- Tenderness, discoloration, and inability to retract penile foreskin.
- ROS unable to obtain due to AMS.
- Presenting Labs:
  - Straight catheterization attempted but patient was anuric.
  - Non-contrast CT abd/pelvis: bilateral hydronephrosis (fig.1), intramural abscess and gas within the bladder wall (fig.2).
- Urology and critical care consulted.
- CRRT and Bilateral nephrostomy tubes HOD#2: UOP with dark malodourous debris.
- Blood cultures: E.coli and candida. Antibiotics narrowed to Zosyn, Levaquin, micafungin.
- HOD#3 Developed an acute abdomen, surgery consulted.
- CT: pneumatosis intestinalis (fig.3) with pneumoperitoneum.
- Exploratory Laparotomy: contracted bladder with thicken fibrotic wall. Extensive mucosal slough and intraperitoneal bladder perforation (fig.4).
- Pathology: degenerated cells, squamous and transitional cells in background of necrotic debris and bacteria (figs.5).
- Developed DIC HOD#18. Corrected with FFP and platelets.
- Passed away HOD#26 due to hemodynamic instabilities.

Discussion

- Mortality 7%; concomitant EP increases mortality up to 54%.
- Wide variation in patient presentation.
- Pneumaturia and role of diabetes and glycemic control.
- Risk factors: urinary stasis, foreign bodies.
- Radiological clues: curvilinear radiolucency. Ring-down or dirty shadowing, thickened bladder wall.
- CT highly sensitive for intramural gas.
- Role of surgical diversion.
- Nutrition optimization.
- Pathogens typically Escheria coli or Klebsiella pneumoniae (79%).
- Little literature on necrosis in EC.

References


Necrotizing Emphysematous Cystitis: a case report

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