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PHOTO QUIZ

A woman with abdominal pain and swelling

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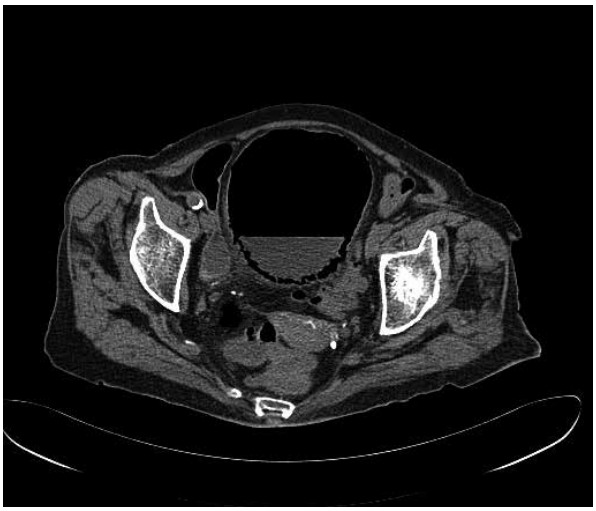
CASE REPORT

An 87-year-old woman presented with acute and progressive suprapubic pain and swelling (*figure 1A*). The patient had a history of recurrent lower urinary tract infections with haematuria. She had hypertension and chronic kidney injury and had undergone coronary artery bypass graft surgery. She had had multiple myeloma for 12 years, for which she only received supportive treatment with routine blood transfusions. She did not complain of nausea or vomiting, but did have intermittent diarrhoea. In the past years, she was treated several times with different antibiotics for relapsing urinary tract infections.

Figure 1A. *Abdominal swelling*

Figure 1B. *Computed tomography of the abdomen*



Percussion of the lesion was hypertympanic. Laboratory tests showed acute on chronic renal insufficiency, complicated by metabolic acidosis with hyperkalaemia. An ultrasound was inconclusive. The image of the computed tomography scan is shown in *figure 1B*.

WHAT IS YOUR DIAGNOSIS?

See page 287 for the answer to this photo quiz.

ANSWER TO PHOTO QUIZ (PAGE 283)

A WOMAN WITH ABDOMINAL PAIN AND SWELLING

DIAGNOSIS

The abdominal swelling and hypertympanic percussion in the suprapubic region are consistent with air in the bladder. Therefore, the ultrasound was inconclusive. The computed tomography scan shows an image consistent with emphysematous cystitis, with air in the bladder and bladder wall. Emphysematous cystitis is an uncommon condition in which gas-forming (fermenting) pathogens create pockets of gas in the bladder, as well as in and around the bladder wall. Patients affected by this disease often have chronic urinary tract infections, a neurogenic bladder, or diabetes mellitus.[1] The most common pathogen causing emphysematous cystitis is *E. coli*, but other pathogens are reported as well, such as *Enterobacter* species, *Klebsiella pneumonia*, *Streptococcus* species, *Clostridium perfringens*, and *Candida albicans*.[2]

Soon after admission, the volume of urine output declined. The patient had acute on chronic renal failure, complicated by metabolic acidosis and hyperkalaemia. Cystography showed inflammation of nearly all visible tissue. Urine cultures of the past year and the current admission showed group B *Streptococcus*, *E. coli*, and *Enterobacter* cloacae, and some were polymicrobial. A urinary catheter was inserted and the patient was intravenously treated with ceftriaxone for ten days, followed by co-trimoxazole orally for seven days. The patient recovered fully to her previous condition.

REFERENCES

1. Quint HJ, Drach GW, Rappaport WD, Hoffmann CJ. Emphysematous cystitis: a review of the spectrum of disease. J Urol. 1992;147:134-7.
2. Bobba RK, Arsura EL, Sarna PS, Sawh AK. Emphysematous cystitis: An unusual disease of the Genito-Urinary system suspected on imaging. Ann Clin Microbiol Antimicrob. 2004;3:20.