Post-resection emphysematous prostatitis due to multi-resistant Enterobacter cloacae complex: A case of successful conservative management

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ABSTRACT
Emphysematous prostatitis is a rare complication of bacterial prostatitis with a high mortality rate. Due to limited publications on this entity, its management is not standardized. In the reported cases, the treatment consisted of rapid and complete drainage of the abscess, with early antibiotic therapy. We report a case of emphysematous prostatitis in a 76-year-old patient at D17 of a prostatic resection who presented to the emergency room with asthenia and fever. Clinically, he was in sepsis. The isolated germ is an Enterococcus Enterobacter cloacae complex, sensitive to Piperacillin + Tazobactam. The ultimate evolution was favorable.

1. Introduction
Emphysematous prostatitis is a particularly rare form of prostatic abscess, which is characterized by a localized accumulation of gas and pus in the prostate gland. The first case was reported by Mariani in 1983. Prior to the antibiotic era, the mortality rate from prostatic abscess was high (6–30%). The current reported mortality rate is 3–18%. Because of the limited literature on this entity, its management is not standardized. In the present case, the authors report a case of post-resection emphysematous prostatitis managed conservatively with a favorable ultimate outcome.

2. Clinical case
A 76-year-old patient, known diabetic on well-balanced insulin, presented to the emergency room with fever and physical asthenia of progressive onset. Seventeen days before, he had undergone a prostatic resection with simple postoperative effects. Resection was indicated in the face of recurrent urine retention Preoperatively, the blood test was normal and the urine test was polymicrobial. A Fosfomycin-based antibiotic prophylaxis was respected. The removal of the bladder catheter was performed on day 2 after 24 hours of serum-based irrigation. On admission, the clinical examination revealed an asthenic patient, conscious and hemodynamically stable, febrile at 38.1 °C. Pelvic pain was present. The biological workup performed on admission noted an inflammatory syndrome (white blood cells at 12.1G/L with neutrophilic polymuclear predominance and c reactive protein at 129) with renal insufficiency (plasma creatinine at 325 μmol/L) without hyperkalemia. Blood glucose was 17.4 mmol/L with negative ketone levels. The non-injected abdominal and pelvic CT scan showed a globe bladder upstream of an emphysematous infiltration of the prostate (Fig. 1). Our therapeutic attitude consisted of drainage by a suprapubic catheter (purulent urine), the introduction of antibiotic therapy, analgesic, rehydration and continuation of insulin therapy. Monitoring was clinical-biological. Urine and blood culture analysis allowed the isolation of a germ: Enterobacter cloacae complex. He was multiresistant (Ampicillin, Amoxicillin + clavulanic acid, Ceftriaxone, Cefoxitin, Imipenem, Gentamicin, Ciprofloxacin, Colistin, Trimethoprim + sulfonamides) but sensitive to Piperacillin + Tazobactam. The final evolution was favorable with the improvement of clinical signs and the normalization of biological parameters.

3. Discussion
Emphysematous prostatitis is a rare entity. It is a complication of acute bacterial prostatitis. Emphysematous prostatitis occurs mainly in patients in their 50s and 60s. The risk factors described are immunosuppression, diabetes, alcoholism and recent urinary catheterization or endoscopic procedure. Three risk factors were found in our patient. These were diabetes, a recent endoscopic manipulation of the prostate...
and bladder catheterization. However, the age of our patient was higher than the average age reported in the literature.

Symptomatology is highly variable: fever, abdominal and perineal pain, dysuria, rectal tenesmus. Rectal examination usually reveals an increase in the size of the prostate and prostatic fluctuation. The pathogens often implicated are Escherichia coli, Klebsiella, Proteus and Citrobacter. In the study published by Wen et al., K. pneumoniae was isolated in 50% of cases. The presenting signs in our patient were fever and asthenia. Enterobacter cloacae complex was the pathogen isolated in our patient. It is a common nosocomial pathogen capable of producing a wide variety of infections. It has the particularity of being highly resistant to antibiotics. Indeed, it is multi-resistant in our case. Only Piperacillin + Tazobactam was sensitive.

The diagnosis of emphysematous prostatitis is based on imaging. CT scan is the most commonly used method to diagnose emphysematous prostatitis. It describes the presence of gas collections in the prostatic parenchyma. In the present case, an emergency non-injected abdominal-pelvic CT scan demonstrated a full bladder upstream of an emphysematous prostate infiltration.

The treatment of choice is rapid and complete drainage of the abscess, with early antibiotic therapy. Management of blood sugar imbalance is a mainstay of treatment. Drainage of the abscess can be performed transurethrally or transperineally. In patients with acute urine retention, a urinary diversion is indicated. Cystotomy appears to be the best means of diversion because urethral instrumentation may aggravate sepsis. Since the patient had just been resected, our intervention consisted of the placement of an ultrasound-guided suprapubic catheter.

4. Conclusion

Emphysematous prostatitis is a rare and serious entity. It is a little-known complication of endoscopic resection of the prostate with still high mortality. It occurs particularly in diabetic patients with other associated risk factors. It should be considered in patients at risk of presenting a urosepsis picture after a prostatic resection. A CT scan can confirm or refute the diagnosis, as the patient’s prognosis depends on the management.

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