

An Unusual Case of Endometritis

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1. Summary

This is a case report of a pyometra, with no identified risk factor, leading to septic shock. The outcome was favourable after surgery and antibiotic therapy. Pyometra is a rare condition, mainly affecting elderly women. It occurs mainly after intrauterine manoeuvres or in the context of neoplasia. The prognosis for these conditions is guarded if treatment is delayed.

We report the case of a 17-year-old female patient with no previous pathological history, who was naïve and not sexually active. She was known to be allergic to penicillin.

The clinical history dates back 10 days, with the onset of pelvic pain, more marked on the left, evolving in a context of deteriorating general condition. She was referred to emergency by a general practitioner because she had not improved with symptomatic treatment. Questioning of the patient revealed no sexual activity or recurrent genital infection.

On arrival at the emergency department, the patient presented with arterial hypotension of 90/50 mmHg, associated with tachycardia at 100 bpm and polypnoea at 23 cycles/min. The patient was hyperthermic at 39° C. Abdominal examination revealed tenderness in the left iliac fossa. A rectal examination combined with abdominal palpation revealed a left laterouterine mass reaching halfway to the umbilicus, forming a block with the uterus and painful on mobilisation. The rest of the clinical examination was unremarkable. A vaginal examination was not performed as the patient was a virgin.

Antibiotic treatment with Moxifloxacin + Metronidazole + Doxycycline was started immediately.

The initial laboratory work-up in the emergency department revealed a major inflammatory syndrome with a C reactive protein (CRP) of 343.8 mg/L and hyperleukocytosis of 27.23 G/L. BHCG

was negative.

A CT scan performed in the emergency department showed a left latero-uterine mass with multiple cystic pockets, possibly related to a left tubo-ovarian complex of an infectious nature.

An abdomino-pelvic ultrasound was performed, revealing a fairly well-limited, rounded, compartmentalised formation with fine echogenic content, measuring 9.72 x 9.08 cm, possibly related to a tube-ovarian complex. The uterus and left ovary were not visualised; the right ovary was normal. There was no evidence for a digestive origin of this infectious syndrome.

In view of the severity of the infection, surgical management was decided upon to treat the entry point of the infection. A Mackenrodt incision was used. Inspection of the peritoneal cavity revealed an adherent shielded pelvis, with a friable renal centro pelvic mass adherent to the intestine and omentum, and multiple pus pockets. The two adnexa were not seen. Examination of the liver, gallbladder, spleen and gastrointestinal tract was unremarkable. Adhesiolysis was performed, with pus draining from the mass and subsidence of the pockets, aspiration of 300 cc of frank pus, and sampling of the friable mass (uterus?). The pelvis was not explored, given the adherent and inflammatory state.

Anatomopathological analysis of the surgical specimen revealed acute inflammatory and suppurative changes, with no suspicious cells. The initial retention of pus therefore confirmed the diagnosis of pyometra.

Bacteriological samples were positive for multi-sensitive proteus mirabilis.

The postoperative course was favourable, with rapid withdrawal of vasopressor amines, enabling the patient to wake up quickly within 24 hours and return home immediately afterwards.

2. Discussion

The originality of this case lies in the absence of classic risk factors for pyometra (uterine retention of pus) in a woman with no history of intrauterine device use, abortion or recent childbirth. In addition, the presentation in the form of septic shock is unusual and requires a rapid, aggressive response. Endometritis is a classic complication in the aftermath of caesarean sections and vaginal deliveries, following multiple gynaecological examinations [1]. It is a complication frequently found in the context of intrauterine foreign bodies or attempts to introduce intrauterine foreign bodies (clandestine abortions).

However, in the case reported here, it was more a case of pyometra than endometritis, as there was uterine retention of pus [2]. There was no argument for an intrauterine foreign body, even a transitory one, based on the data from the rigorous questioning of the patient and examination of the surgical specimen.

There are few data in the literature on the incidence of this complication in the general population. The incidence reported in the literature is less than 1% [3]. In a recent study, Lien et al. reported a series of seven cases over a period of five years [4]. This condition mainly affects elderly postmenopausal women (mean age 73.9) [4]. However, most of these patients did not present with septic shock (one in seven).

The clinical presentation is a specific with febrile lower abdominal pain associated with an infectious syndrome that may progress to septic shock [2-5]. This condition is often associated with the presence of uterine neoplasia or an intrauterine device [4]. However, occurrence without any predisposing factor is found in 40% of cases [4].

In the work by Lien et al, the rate of spontaneous uterine perforation was high (three out of seven cases, i.e. 43%) [4].

The flore usually found in this pathology includes anaerobic germs as well as gramnegative bacilli (*E. Coli*, *Klebsiella pneumoniae* essential- ment). Co-infection by several bacterial species is the rule [6]. Antibiotic therapy should therefore involve a broad-spectrum penicillin (ureidopenicillin, third-generation cephalosporin, carboxy penicillin) combined with an antibiotic active against anaerobic germs (metronidazole) or a penicillinase inhibitor (clavulanic acid or tazobactam).

The state of septic shock necessitated initial surgical management with exploratory laparotomy in view of the severity of the clinical picture. In a recent study, Ou et al. reported a series of 14 pyometria, six of which resulted in spontaneous perforation. The predictive factors for perforation found by these authors were: fièvre, pelvic pain and vomiting [6]. In addition to the mortality associated with septic shock, the mortality associated with pyometra is not negligible, at around 15% [4]. These data therefore justify aggressive management, especially in young patients. Mortality is related to the development of septic shock with or without

uterine perforation leading to peritonitis. These data therefore justify the surgical exploration proposed in this patient. Medical management based on antibiotic therapy alone seemed insufficient in this serious situation (septic shock). Furthermore, in the Lien et al. series, the only patient to die was treated with antibiotics alone, without surgical management [4]. This case is a reminder that the gynaecological portal of entry should not be overlooked in the search for the source of infection in septic shock. Prompt medical and surgical management is the best guarantee of a favourable outcome in septic shock with an abdomino-pelvic origin.

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