

Letters to the Editor

Primary peritonitis by *Streptococcus pyogenes*. A condition as rare as it is aggressive

Key words: Primary peritonitis. *Streptococcus pyogenes*. Toxic shock.

Dear Editor,

We report the case of a 60-year-old female patient with a history of blood hypertension who presented to the emergency room for abdominal pain of increasing severity and 24 hours' standing with impaired general status, fever of up to 38.7 °C, and somnolence. Upon arrival, the patient had a heart rate of 115 bpm, hypotension (80/40 mmHg), acute respiratory distress, and both hepatic and renal failure. During her examination, the patient was drowsy and had a diffusely tender abdomen with peritoneal irritation signs. Blood tests revealed 22,000 WBCs (82% neutrophils), C-reactive protein 32.4 mg/dL, total bilirubin 3.2 mg/dL, GOT 300 U/L, GPT 160 U/L, LDH 200 U/L, AP 310 U/L, 91,000 platelets, creatinine 2.3 mg/dL, and prothrombin activity 64%. An abdominal CT scan was performed, revealing a minimal amount of free intraperitoneal fluid with no other findings (Fig. 1). Given the patient's poor status, an exploratory laparoscopy was carried out, which found a moderate amount of diffuse purulent exudate, particularly in interloop and lesser pelvis areas, with no additional findings, including washout of the peritoneal cavity and placement of drains. During the procedure the patient required the infusion of vasoactive drugs for hemodynamic instability. After surgery she was transferred to the Intensive Care Unit on wide spectrum antibiotics pending culture results. Peritoneal

exudate cultures from the surgical procedure revealed *Streptococcus pyogenes*, whereas all the remaining cultures performed during hospital stay were negative. The patient had a favorable outcome and was taken to the ward on the 5th day post-surgery, being subsequently discharged from hospital at day 10 after the procedure.

Discussion

S. pyogenes is a beta hemolytic streptococcus which is well known as a cause of pharyngotonsillar, skin and soft tissues infection (1-3). Primary peritonitis (PP) by *S. pyogenes* is a rare condition with only a few isolated cases reported (3), most of them with an untoward outcome because of septic shock or streptococcal toxic shock syndrome (STSS) (4,5). PP cases by *S. pyogenes* predominantly involve previously healthy young

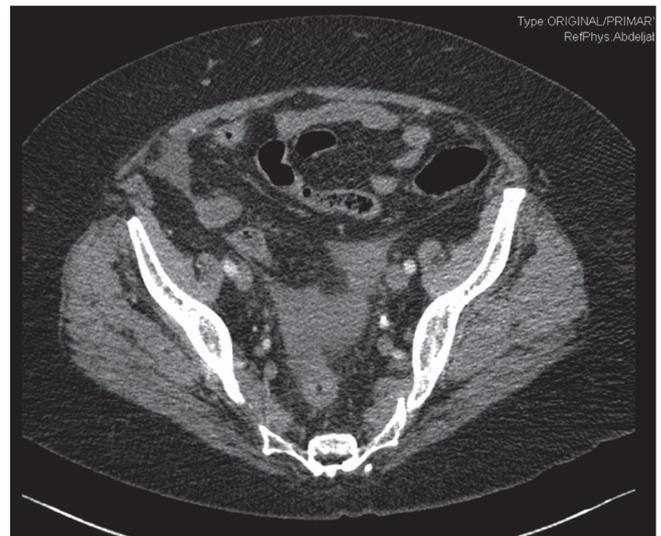


Fig. 1. CT scan showing minimal amount of intraperitoneal free fluid as the only finding.

women. Some authors have described the potential for peritoneal colonization via an ascending route through the female genital tract (6). PP diagnosis is usually retrospective, when other causes have been ruled out by surgery and culture is positive post hoc. An appropriate differential diagnosis from conditions such as gram-negative shock, staphylococcal toxic shock, meningococcal disease, viral infection, etc., is crucial. Abdominal CT may be helpful but a variable amount of free intraperitoneal fluid is usually the only finding (7). The surgical approach is usually laparoscopy in experienced sites. Some authors recommend a conservative approach for suspected PP with positive *S. pyogenes* cultures and normal CT scans, but most advocate for surgery (8-10). Attentive monitoring at an Intensive Care Unit and adequate antibiotic therapy are key in association with surgery. There is no clear consensus on the antibiotics to be used for severe infection with *S. pyogenes*; empirical amoxicillin-clavulanic 2 g IV every 8 hours is usually the initial choice, followed after microbiological confirmation by clindamycin 600 mg IV every 8 hours and a third-generation cephalosporin (ceftazidime 2 g IV every 12 hours) to cover clindamycin-resistant strains (5).

Israel Abellán¹, Antonio González¹, Pilar Selva-Cabañero²
and Antonio Bernabé¹

¹*Department of General Surgery and Digestive Surgery.
Hospital Universitario Los Arcos del Mar Menor. San Javier,*

*Murcia. Spain. ²Departments of Gynecology and Obstetrics.
Hospital General de Orihuela. San Bartolomé, Alicante. Spain*

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