



# Rare Anaerobic Peritonitis Due to *Paeniclostridium sordellii*: A Case of Successful Eradication

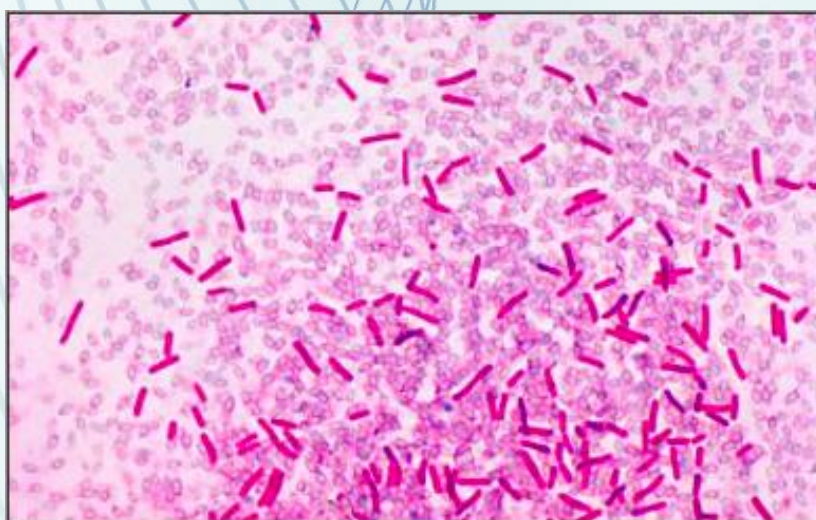
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## Introduction

*Paeniclostridium sordellii* is an anaerobic, spore-forming, gram-positive bacillus rarely implicated in human disease. Reported infections, particularly in gynecologic and injection drug use settings, have been associated with fulminant sepsis and high mortality. Peritonitis due to *P. sordellii* is exceedingly rare, especially in immunocompetent individuals.

## Case Presentation

We describe a 47-year-old Indian male residing in the Philippines who presented with a month-long history of abdominal pain, hematemesis, and progressive abdominal distension. On admission, he had fever, chills, and hematochezia. Laboratory workup revealed anemia, elevated transaminases, and ascites with high SAAG. Imaging showed splenomegaly, heterogeneous liver parenchyma, and massive ascitic fluid collection. Initial empiric therapy with ceftriaxone failed to resolve fever. Paracentesis yielded 2400 mL of clear yellow ascitic fluid (SAAG >1.1; ANC 424, 80% lymphocytes). Antibiotics were shifted to piperacillin-tazobactam, with subsequent defervescence. On the fourth hospital day, ascitic fluid culture grew gram-positive bacilli, later confirmed as *P. sordellii* on day 9. Due to persistent ascites, an abdominal pigtail catheter was inserted and repeat cultures demonstrated complete eradication of the organism. The patient successfully completed intravenous therapy and was discharged improved.



Representative images of *P. sordellii* in gram stain (left) showing gram-positive cocci and blood culture agar plate (right)

## Conclusion

Isolation of anaerobes in spontaneous bacterial peritonitis is rare, with *P. sordellii* cases in literature often rapidly fatal due to potent exotoxins. We present, to our knowledge, the first documented case of *P. sordellii* peritonitis in an immunocompetent adult, successfully treated with piperacillin-tazobactam. This unusual case highlights the importance of vigilance and consideration of anaerobic pathogens in non-responsive peritonitis. Early recognition and appropriate antimicrobial coverage for anaerobes are essential in this case.