Clinical Case Reports

Case Report

Jejunal Perforation-An Uncommon Complication of Gastrointestinal Tuberculosis

Erick Imbertson* and Mark Bookspan
Santa Barbara Cottage Hospital, California, USA

Abstract

One third of the world’s human population has been infected with Tuberculosis (TB), the prevalence being the highest in developing countries. With world travel becoming increasingly more common, disease can readily spread from endemic areas to areas not otherwise affected. TB is thought of as a pulmonary disease but, in fact, it can affect the entire organism. We present an unusual case of an intestinal perforation due to abdominal tuberculosis.

Case Presentation

A 48 year old male from Mexico was seen by his primary care physician complaining of diffuse abdominal pain and bloating for 1-2 days. The physician was concerned about serious intra-abdominal pathology and referred him to the Emergency Department (ED). The patient, however, waited 3 days before going to the ED. He arrived complaining of worsening abdominal bloating and fevers, but his pain had improved. The patient's family stated he was becoming confused and lethargic. He denied changes in his bowel movements, hematochezia, melana, nausea, or vomiting. He drank approximately 10 beers per day; otherwise his past medical and social history were unremarkable.

On physical exam: Temp-101.3; BP-136/92; HR-134; RR-37; SpO2-92% on room air.

General: He was in mild respiratory distress, confused and agitated.

HEENT: Poor dentition, no nuchal rigidity, pupils 3 mm equal and reactive.

Cardiovascular: Tachycardic with no murmurs.

Lungs: Rhonchi bilaterally.

Abdomen: Distended, tympanic, mildly tender to palpation diffusely, no rebound or guarding.

Neurologic: Confused, agitated, moving all extremities, no focal deficits.

Laboratory studies: WBC-12.9 with 48% bands, 44% PMNs, 5% lymphocytes and 3% monocytes; Hgb-14.2; platelets-199; procalcitonin-19.2; albumin-3.0. The INR, bilirubin and transaminases were within normal limits.

Imaging Studies: Chest X-ray-pneumoperitoneum and bilateral pulmonary nodules and cavities, free intraperitoneal air and inflammatory changes in the ascending colon.

CT scan: chest, abdomen and pelvis-Multiple bilateral pulmonary nodules and cavities, free intraperitoneal air and inflammatory changes in the ascending colon.

The patient was placed in respiratory isolation, and then taken to the operating room. A single 3 mm perforation in the jejunum was identified and resected. Postoperatively he developed an ileus and had good oral intake. The patient was discharged to a public health isolation facility on hospital day 31 (Figures 1-3).

The patient was in mild respiratory distress, confused and agitated. Poor dentition, no nuchal rigidity, pupils 3 mm equal and reactive.

Discussion

Tuberculosis (TB) remains a worldwide health problem as evidenced by an increase in his albumin from 1.6 to 2.4 g/dL, a decrease in his heart rate from the 130’s to the 80’s, oxygen saturation improvement from 92% to 100% on room air, and a hemoglobin as low as 8.3 rising to 10.3 g/dL on discharge. He was able to tolerate his diet and had good oral intake. The patient was discharged to a public health isolation facility on hospital day 31 (Figures 1-3).

*Corresponding author: Erick Imbertson, MD, Santa Barbara Cottage Hospital, California, USA, E-mail: eimbertson@yahoo.com

Received December 04, 2012; Accepted January 18, 2013; Published January 21, 2013


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organ system. The gastrointestinal tract is the 6th most common
doi:10.4172/2165-7920.1000245

Patients that are unable to tolerate enteral medications, such as


References

misdiagnosed because the symptoms are nonspecific and can mimic numerous other intra-abdominal pathologies, such as inflammatory bowel disease, colon cancer, or gastroenteritis.

Mortality rates from intestinal perforation due to TB vary from 17%-51% [4-6]. Perforation can occur at any time during the course of the disease, from the initial presentation to 4 months after the initiation of anti-tuberculosis treatment, and may occur in 6.6% of patients with abdominal TB [4,7]. Mortality rates are higher in patients when the surgical repair is more than 36 hours after perforation, or when there were multiple perforations and/or multiple strictures [4,5].

Patients that are unable to tolerate enteral medications, such as ours, cannot start the typical four drug anti-tuberculosis treatment (rifampin, isoniazid, pyrazinamide, and ethambutol) as these are enteral medications. Parenteral anti-tuberculin options include: Intravenous (IV) fluoroquinolones (moxifloxacin-400 mg daily, levofloxacin-500-1000 mg daily and ciprofloxacin), intramuscular (IM) or IV aminoglycosides (amikacin-15 mg/kg up to 1000 mg daily, kanamycin-15 mg/kg up to 1000 mg daily and streptomycin-15 mg/kg up to 1000 mg daily), IV rifampin-10 mg/kg up to 600 mg daily, IV or IM isoniazid-5 mg/kg up to 300 mg daily. Linezolid also has an off labeled use as an anti-tuberculosis agent. An acceptable treatment regimen is to use intramuscular streptomycin and isoniazid with an intravenous fluoroquinolone until the patient is able to tolerate enteral nutrition [8].

In conclusion, Cases of abdominal TB with perforation are rare. While there are many people worldwide who have been exposed to TB and have latent TB, few will develop abdominal TB (2-3%). Among those even fewer will develop an intestinal perforation. The vast majority of TB cases are in developing countries, but with travel, cases of diffuse TB can be seen anywhere in the world. Intestinal perforation is a medical emergency with mortality rates as high as 51%. Delays in the diagnosis and treatment of intestinal perforation lead to worse outcomes. Due to this, we need to keep this diagnosis in mind and act quickly.

Figure 2: CT chest: bilateral pulmonary nodules.

Figure 3: CT abdomen: jejunal perforation.