

Background

A 75-year-old male with no known significant past medical history presented the Emergency Department with abdominal pain, fevers, and chills. He was initially afebrile and without leukocytosis and was admitted for surgical evaluation of a possible intussusception seen on CT and an iliac aneurysm. During his inpatient stay, he developed fevers and met sepsis criteria. A subsequent abdominal ultrasound and MRCP showed a portal vein thrombosis. He began a course of ceftriaxone and azithromycin due to this positive blood culture and was eventually discharged with the recommendation to complete one month of therapy.

References

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Contact: emily.rey@arnothealth.org;
sahejpreet.kaur@arnothealth.org;
ganesh.arun@arnothealth.org

Imaging

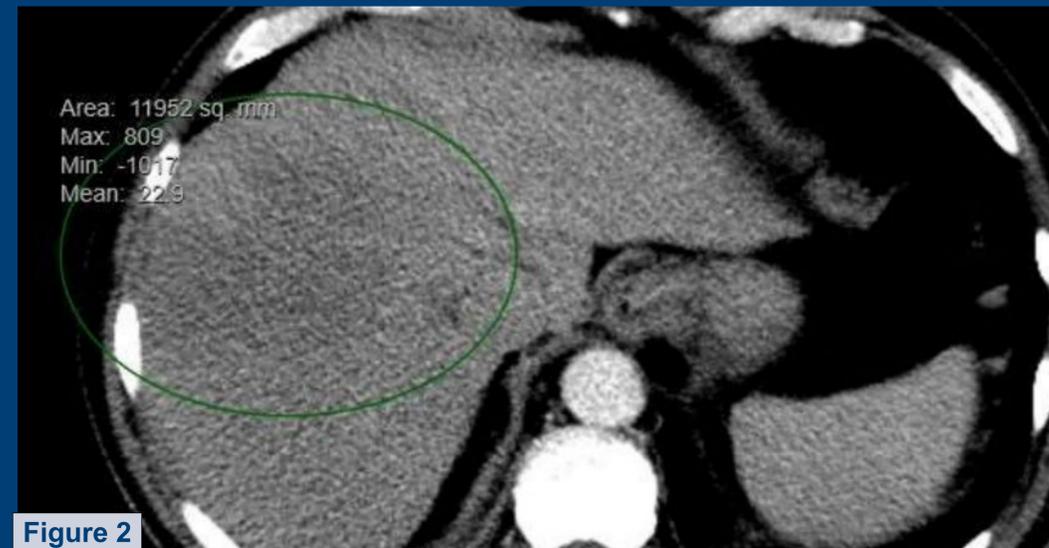


Figure 1: Lack of Doppler flow involving the main portal vein with thrombosis of the left portal vein seen on abdominal ultrasound.

Figure 2: Large area of right hepatic lobe hypoenhancement seen on contrast-enhanced CT of the abdomen.

Discussion

Pylephlebitis is a rare complication of sepsis secondary to portal vein thrombosis. As witnessed in our case, the symptoms include abdominal pain, fevers, chills, nausea and vomiting. The initial concern for this diagnosis involves suspicion of infection. Unfortunately, the differential for this presentation is wide so it is important to rule out other diagnoses including diverticulitis, malignancy, infectious diarrheas, cholecystitis, inflammatory bowel disease and biliary obstructions. To narrow the diagnosis, imaging including ultrasound of the gallbladder or CT scan of the abdomen are readily used. Our case used imaging early in the hospital stay with accurate diagnosis of the underlying issue. Unfortunately, the presence of thrombus in the portal vein is often missed on imaging and is usually revealed postmortem due the high mortality rate and difficult recognition. Complications of pylephlebitis include abscess formation, extension of clot burden, portal vein perforation, and pancreatitis.

The infectious etiology involved in pylephlebitis is polymicrobial including E.coli, Bacteroides, Clostridium, Klebsiella and Strep species which are normal flora in the GI tract. The mechanism of local inflammation and damage involves the surface component of these organisms joining together to over stimulate the immune system. Blood cultures are positive in 50 - 80% of diagnosed individuals. Our case is unique in the fact that the blood cultures were collected post his antibiotic regimen likely causing the sterile results seen in the case. Antibiotic regimens to cover these organisms include broad spectrum gram negative coverage. Due to the limited available research investigations, antibiotic durations have not yet been established. Labs helpful in this decision process include Liver function tests, WBC count, Hemoglobin counts. The consensus from the clinical standpoint recommends duration of treatment for at least four weeks given the portal vein location.

A newly investigated treatment avenue of pylephlebitis includes anticoagulation. The theory for treatment is prevention of bowel ischemia or infarction secondary to extension and worsening of the initial clot burden. There are multiple studies showing benefits and risks to anticoagulation, so this decision is physician dependent. It is important to note the continued research involved with anticoagulation in patients with pylephlebitis. Early diagnosis with recognition is paramount for aggressive treatment. Mentioning pylephlebitis on the differential list will clear the debate of using anticoagulation by increasing the total number of cases diagnosed and treated.