A Shocking cause of Shock:
Inferior Mesenteric Vein Thrombophlebitis presenting as Shock

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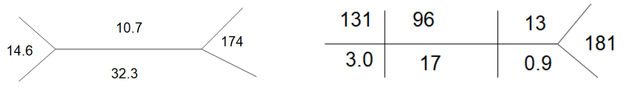
Objective:

- Recognize pylephlebitis as a rare cause of shock in a patient presenting with non-specific symptoms.
- Discuss the treatment of IMV thrombophlebitis in regards to anticoagulation and antibiotics.

Case Report:

- A 54 years old woman was brought to emergency department with complaints of mental status change, lethargy, abdominal and back pain.
- **Past Medical History:** Uncontrolled diabetes mellitus, hypertension, non Alcoholic steatohepatitis and hyperlipidemia.
- **Hemodynamics**: Blood pressure (BP) was 70/50, respiratory rate 18, pulse 108 and temperature 100.6.
- **Physical Examination:** She was alert but very lethargic and had tenderness to palpation (TTP) in peri-umbilical area. No TTP on back examination. Cardiac, respiratory and neurologic examination was unremarkable.
- Initial laboratory evaluation revealed leukocytosis, lactic acidosis and mild hyperbilirubinemia.



- Lactic Acid: 5.5. PT 15.1, INR 1.3. AST 44, ALT, ALP 165, Total Bilirubin 2.4, direct bilirubin 1.3.
- She was started on broad spectrum antibiotics and intravenous fluids and later required vasopressor support.
- **Imaging:** Computerized tomography (CT) of head and MRI lumbar spine was unremarkable. MRCP ruled out cholecystitis or dilated biliary ducts.
- CT abdomen and pelvis with IV contrast showed **thrombosis of inferior mesenteric vein (IMV) with air locule, suggesting septic thrombophlebitis** without any diverticulitis or colitis seen.
- She was started on heparin drip for thrombophlebitis.
- **Hematological workup** (Antithrombin III, factor V leiden, Protein C and S, Cardiolipin antibodies) was negative.

Imaging

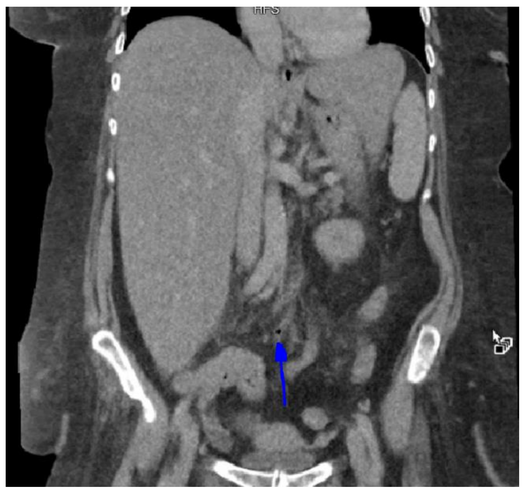


Figure: Coronal section CT Abdomen showing Air Locule in IMV.

Treatment:

- Blood cultures revealed E-Coli and Streptococcus Angiosus sensitive to penicillin and antibiotics were narrowed to Ampicillin-Sulbactam.
- She was not a candidate of surgery due to multiple comorbidities.
- Anticoagulation (AC) was continued during hospitalization and she was prescribed apixaban and Amoxicillin/Clavulanate on discharge.

Follow Up:

- Follow up CT abdomen revealed resolution of IMV thrombosis.
- Apixaban was discontinued after 1 month.
- 6 weeks Antibiotics course was completed with resolution of symptoms.

Discussion:

- Pylephlebitis is a suppurative thrombosis of the mesenteric venous system that is associated with intra-abdominal infections (appendicitis is the most common)[1-3]. Primary source of infection is unclear in most of the patients with pylephlebitis.
- IMV thrombophlebitis is rare entity with significant morbidity and mortality, presenting with non-specific symptoms[2].
- Although rare, it is important to recognize IMV thrombophlebitis as a source of sepsis in patients presenting with nonspecific symptoms like fatigue, malaise, abdominal pain, fever and back pain[2-5].
- Contrast enhanced CT can identify pylephlebitis early.
- Most cases are associated with bacteremia mainly E-Coli and Proteus. Bowel ischemia, infarction and hepatic abscesses are the possible complications[4].
- Treatment consists of broad spectrum antibiotics against facultative gram negative bacilli, aerobic and anaerobic streptococci for at least 4 week[2-6].
- Anticoagulation is controversial but some studies have suggested recanalization of veins following AC[7,8].
- Surgical resection is reserved for patients with progressive intestinal dilatation or peritoneal signs.
- **Conclusion**: Our case highlights the importance of recognizing pylephlebitis as a rare source of septic shock even in the absence of intra-abdominal infections. Further evidence is needed to justify AC initiation and duration of antibiotics.

References:

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