Lactobacillus Bacteremia in a Veteran with Hepatic Abscess

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Presentation

We present the case of a 65-year-old male veteran with a history of type II diabetes, chronic kidney disease stage III, and biliary dilatation of unclear etiology admitted with several days of lethargy and weakness found to be in severe diabetic ketoacidosis.

Vital Signs
- Temp 35.8 C
- HR 91
- BP 107/67
- RR 17
- SpO_2 100% on RA

Physical Exam
- Notable for cachectic appearance, non-tender abdomen, R BKA with dressing clean and dry, A&Ox4

Notable Admission Labs
- Blood glucose 935 mg/dL
- Bicarbonate 9 mEq/L
- Anion gap 24
- Venous pH 7.07
- Beta-hydroxybutyrate >8 mmol/L
- Hgb A1c >16.5%

Hospital Course

Day 1
- Started on insulin infusion
- Overnight had acute decline in mental status and fever to 39.4 degrees Celsius
- Cultures sent and broad-spectrum antibiotics started

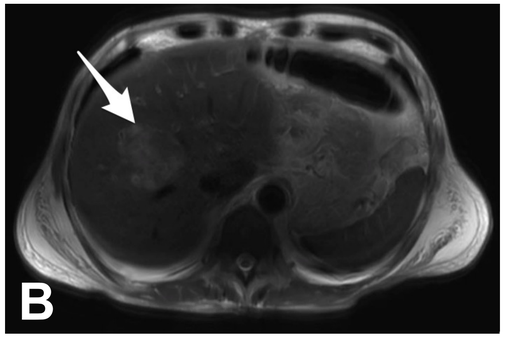
Day 3
- Blood cultures showed Gram-positive rods

Day 4
- Blood cultures speciated to Lactobacillus; antibiotics narrowed to ampicillin
- Triple phase CT showed enlarged common bile and pancreatic ducts and an area of decreased density in the liver concerning for abscess, cholangitis, or cholangiocarcinoma (see **Image A**)
- Liver function tests showed mixed pattern of injury with cholestatic predominance (alkaline phosphatase 600 U/L, AST 102 U/L, ALT 89 U/L, total bilirubin 0.4 mg/dL)

Day 5
- MRCP confirmed a 5.5 x 4.5 x 3.0 cm mass in the right hepatic lobe (see **Image B**)

Day 7
- ERCP showed ampullar stenosis but could not further visualize the hepatic mass
- Antibiotics broadened to ampicillin-sulbactam to cover hepatic abscess
- Interventional radiology deferred drainage until medical management trialed

Day 12
- Patient discharged on moxifloxacin
- Repeat CT planned with follow up in Hepatology and Infectious Disease



Discussion

Lactobacilli
- Lactobacilli are facultative anaerobic, Gram positive bacilli found in the normal flora of the gastrointestinal tract, and female genitourinary tract.
- Generally nonpathogenic and used as probiotics.[1,2]
- Implicated in serious clinical infections including bacteremia, infective endocarditis, and intra-abdominal abscesses.[1,2]
- Risk factors: cancer, diabetes mellitus, pre-existing structural heart disease, total parenteral nutrition use, and immunosuppression.[1,3,4]

Case Reports of Liver Abscess
- 46-year-old man with poorly controlled diabetes presented with abdominal pain, fever, and weight loss and was found to have Lactobacillus bacteremia and liver abscesses.[1]
- 82-year-old woman with diabetes, end stage renal disease, and recent probiotic administration was found to have both Lactobacillus bacteremia and liver abscess.[2]
- Both patients had ultimate resolution of their abscesses with drainage and antibiotic therapy.

Conclusion

Lactobacillus is a rare pathogen, but it can be associated with severe disease, including liver abscess. We presented a patient with poorly controlled diabetes and biliary obstruction who was found to have Lactobacillus bacteremia and abnormal liver imaging concerning for abscess. Further study is needed to better understand the epidemiology and frequency of hepatic abscess due to Lactobacillus.

References

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