

When Probiotics Attack: Hemorrhagic Shock Complicated by *Lactobacillus rhamnosus* Septic Shock

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[Supplemental Video](#)

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Introduction

A common result of alcohol use disorder is gastrointestinal bleeds (GIB) which can manifest as life threatening variceal bleeding. Variceal bleeding is an emergency, requiring admission to the intensive care unit (ICU), endoscopy, and often blood transfusions. Despite aggressive care, variceal bleeding still carries a high mortality rate.

Case Report

A 39-year-old male with a history of alcohol use disorder presented with hemorrhagic shock due to GIB and was started on pantoprazole and octreotide infusion and given IV ceftriaxone. Exam showed a massively distended abdomen with jaundice. Due to hemodynamic instability with massive hematemesis, patient went into cardiac arrest and was emergently intubated and gastroenterology consulted for endoscopy while a massive transfusion protocol was initiated and patient transferred to the ICU. Initial endoscopy showed grade 3 esophageal varices with poor visualization of the stomach and five bands placed. Despite banding attempt, bleeding persisted and an emergent transjugular intrahepatic portosystemic shunt (TIPS) was performed, but due to the density of the liver, the needle was unable to pass through the cirrhotic liver and a Blakemore tube had to be placed. After cessation of bleeding, a TIPS was successful and patient successfully extubated and transferred to the floor but required emergent intubation again and ICU readmission. Blood cultures were drawn and empiric treatment initiated with broad spectrum antibiotics. Postmortem, cultures grew *Lactobacillus rhamnosus* which caused septic shock combined with the hemorrhagic shock.

Final/Working Diagnosis

GIB, complicated by septic shock secondary to *Lactobacillus rhamnosus*, is an extremely rare complication. This is due to the translocation of normal intestinal flora, but is normally seen in intestinal perforations in immunocompromised patients. In this case, the GIB allowed the translocation of the bacteria into the bloodstream despite this being intestinal flora. Treatment was initiated with broad spectrum antibiotics.

Management/Outcome/Follow-Up

Despite multiple massive transfusion protocols, two Blakemore insertions, three TIPS, and two intubations, patient's bleeding was unable to be adequately controlled and in the setting of combined hemorrhagic and septic shock, he expired. Postmortem, blood cultures resulted with *Lactobacillus rhamnosus* which would have been covered with the vancomycin, piperacillin-tazobactam, and metronidazole, but most strains are susceptible to ampicillin or clindamycin.

Learning Objectives

Upon completion of this lecture, learners should be better prepared to recognize rare complications of common disease processes in the ICU and manage them.