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Abstract Form

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Project Title:	Challenging Management of a Coexisting Spontaneous Bacterial Peritonitis and Empyema in a Patient with Cirrhosis

Research Category (please check one):

☐	**Original Research**	☒	**Clinical Vignette**	☐	**Quality Improvement**	☐	**Medical Education Innovation**

Abstract

Introduction: Patients with hepatic hydrothorax are at increased risk of bleeding complications during chest tube insertion due to coagulopathy from liver dysfunction, and the presence of pleural fluid can also make the procedure more challenging and increase the risk of complications such as lung injury. Despite these challenges, chest tube insertion may still be necessary in certain situations. We present a case of a patient with spontaneous bacterial peritonitis who was found to have empyema, requiring chest tube drainage for management. Although the patient had underlying hepatic dysfunction and coagulopathy, careful management and supportive care were able to minimize the risks of the procedure and ensure a successful outcome.

Methods: IRB approval was obtained. Single patient chart review was conducted.

Case Report: Patient is a male in his late 40s who presented to the hospital with abdominal distension and shortness of breath. While in the emergency room he was found to have right side pleural effusion and abdominal ascites. He underwent therapeutic and diagnostic tap of pleural and ascites fluid. Patient later found to have history of cirrhosis secondary to alcoholic cirrhosis. Upon further history patient had stopped consumption of ethanol 1 year prior to presentation, however was not on medication for fluid maintenance. Further studies demonstrated spontaneous bacterial peritonitis and empyema. He was started on antibiotic therapy. Due to presence of empyema, patient underwent chest tube insertion. Afterwards, patient continued to have daily output of 2200cc from chest tube. Chest tube was clamped and patient continued to remain stable while inpatient. During hospital course he became encephalopathic as blood urea nitrogen increased to 102 and serum ammonia level increased to 80. Despite control of chest tube output, he was started on laxative therapy for hepatic encephalopathy. His mental condition did not improve, however BUN continued to rise. He was started on dialysis and ultimately had improvement of overall outcome. Patient completed antibiotic therapy while inpatient, returned to baselines, and discharged with outpatient dialysis.

Conclusion: Relative contraindications to chest tube insertion in hepatic hydrothorax include coagulopathy, loculated fluid, underlying lung parenchymal disease, severe hypoxemia, and patient preference. Despite these challenges, chest tube insertion may still be necessary in certain situations, such as in patients with empyema. In such cases, chest tube drainage is essential for effective management and is typically accompanied by a course of antibiotics to treat the underlying

infection. Close monitoring and supportive care are also important for minimizing complications and ensuring a successful outcome.