Umbilical Hernia Rupture Complicated by Enterocutaneous Fistula in 63-years-old Female with Decompensated NASH Cirrhosis

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Umbilical Hernia Rupture Complicated by Enterocutaneous Fistula in 63-years-old Female with Decompensated NASH Cirrhosis

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Introduction

Spontaneous umbilical hernia rupture, known commonly as Flood syndrome, is a rare complication of severe ascites in end stage liver disease. Leakage of ascitic fluid leads to skin ulceration and necrosis which poses a threat of infection in addition to risk of evisceration or incarceration of bowels.

Case Presentation

A 63-year-old female with decompensated NASH cirrhosis, type 2 diabetes, atrial fibrillation, chronic heart failure, and morbid obesity was admitted after she developed sudden rupture of umbilical hernia with large amount of fluid discharge after defecation. She was afebrile and normotensive and was found to have ulcerated, ruptured umbilical hernia with active leakage of yellow fluid. Labs were significant for thrombocytopenia (115 x 10^3/μL), mild creatinine elevation (1.11 mg/dl), hyperbilirubinemia (2.8 mg/dl) and hypoalbuminemia (2.2 mg/dl). CT of the abdomen and pelvis revealed large abdominal wall hernia containing large and small bowels with questionable low-grade partial small bowel obstruction. General Surgery was involved but as she didn't want to undergo any invasive treatment and due to high surgical risk, conservative treatment was recommended. Two days later she became febrile and hypotensive, accompanied by acute kidney injury (1.40 mg/dl) and worsening bilirubin (3.5 mg/dl). Due to high likelihood of SBP, diuretics were held, and ceftriaxone and albumin were initiated. Patient's INR increased to 6.3 and thrombocytopenia progressed (56 x 10^3/μL). Blood cultures showed no growth, but ascitic fluid cultures revealed polymicrobial flora including Bacteroides fragilis raising concerns of enterocutaneous fistula. Fortunately, she improved with conservative management and was safely discharged.

Discussion

Flood syndrome is caused by increased intraabdominal pressure during coughing, vomiting or defecating, like in our patient. Treatment is challenging as surgical repair is associated with high mortality despite known benefits of hernia repair in cirrhotic patients, however, these studies did not include decompensated cirrhosis. Patients are at increased risk of intraperitoneal infection, which was likely the case in our patient, however formation of enterocutaneous fistula is extremely rare.

Ruptured umbilical hernia with ulceration – initial presentation

Healing ruptured umbilical hernia 3 months after initial presentation