

Introduction

- Flood syndrome is a rare yet potentially devastating surgical emergency in patients with decompensated cirrhosis and ascites in which an umbilical hernia ruptures leading to a rush of fluid through the defect.
- It is a rare complication of cirrhosis and has a high mortality rate.
- Herein, we present two cases of flood syndrome in patients with advanced liver disease.

Case Description

Case 1:

- A 37-year-old female with a history of factor Leiden deficiency, MTHFR deficiency, and decompensated alcoholic cirrhosis presented with 1 day of continued fluid leakage from an umbilical wound.
- Vitals on admission: temperature 36.8C, BP 119/61, HR 114 bpm, RR 18 saturating at 100% on room air.
- Abdominal exam showed a positive fluid wave shift and small umbilical hernia with ascitic fluid in the stoma bag.
- Labs were significant for:
 - Total bilirubin 11.6 mg/dl
 - AST 61 U/L
 - ALT 36 U/L
 - ALP of 79 U/L
- She was treated with levofloxacin and underwent hernia repair.
- She later required large volume paracentesis before the fluid leakage stopped and she was discharged home.

Case 2:

- A 48-year-old female with alcoholic cirrhosis and a history of incisional abdominal hernia secondary to laparotomy presented with abdominal distension, pain and leakage of fluid through the hernia site.



Figure 1: CT demonstrating an abdominal wall hernia with sigmoid colon in the hernia sac and ascitic fluid and air.



Figure 2: Sagittal view of the above CT re-demonstrating the abdominal wall hernia.

Case Description cont.

Case 2 continued:

- Exam showed a midline abdominal protuberance with an ulcerated hernia.
- Labs were significant for:
 - Total bilirubin 2.1 mg/dl
 - AST 43 U/L
 - ALT 22 U/L
 - ALP of 136 U/L
- CT confirmed the abdominal wall hernia with sigmoid colon in the hernia sac and ascitic fluid and air (Figures 1-2).
- She was treated with ceftriaxone and the defect was closed by general surgery prior to discharge.

Discussion

- Flood syndrome is a rare complication seen in cirrhotic patients with ascites defined as a rush of fluid through rupture of an umbilical hernia.
- It is associated with serious complications and a high mortality rate of up to 30%.
- The most important step in management of ascites is prevention.
- Sodium and fluid restrictions and diuretics may be used to reduce hypervolemia in these patients.
- Paracentesis is often necessary to aid in fluid removal in those with recurrent ascites; however, the procedure can also increase the risk of developing flood syndrome.
- Ultimately, patients may require surgery to repair the defect.

References

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3. Liu GF, Srinivasan A, Muthuri S, Yerramadha MR, Agraharkar M. Acute abdomen from umbilical hernia rupture to flood syndrome: a case report and review of literature. J Med Cases. 2019;10(10):309-311.