Recurrent scrotal edema in liver cirrhosis

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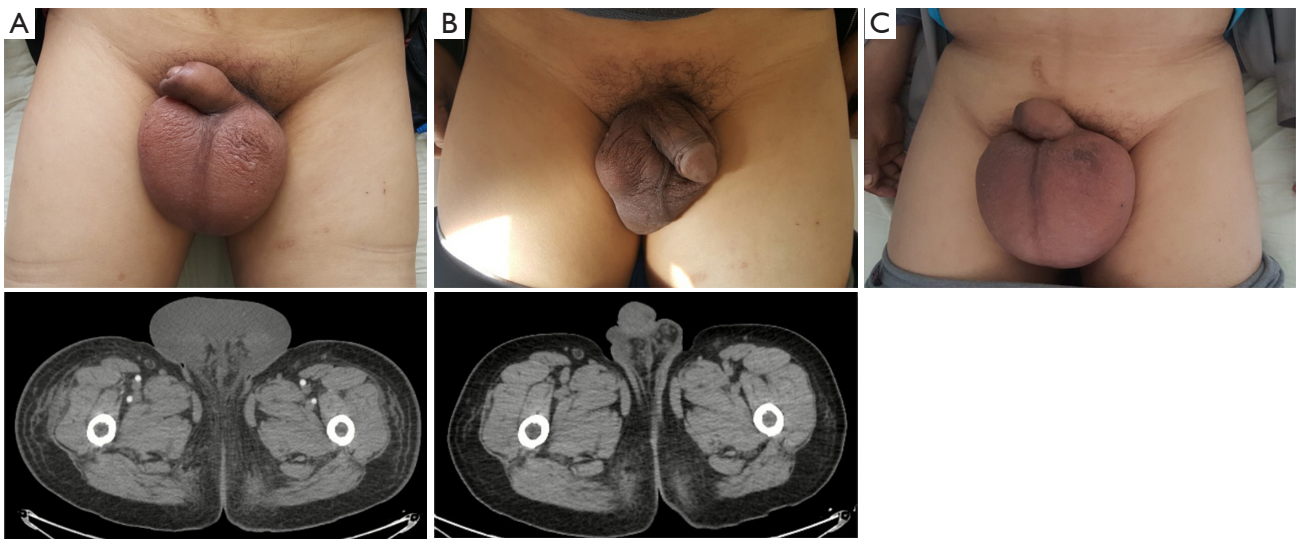

Liver cirrhosis is a potentially lethal disease, which can be complicated by liver failure, hepatic encephalopathy, splenomegaly, variceal bleeding, ascites, and hydrothorax (1,2). Herein, we reported a rare case with liver cirrhosis presenting with recurrent scrotal edema probably due to an extremely albumin level.

On March 18, 2017, a 62-year-old male with a previous history of hepatitis B virus related liver cirrhosis was complaint of progressive edema of scrotum at our department. He denied any history of cardiac, renal, or thromboembolic diseases. On physical examinations, he had moderate jaundice, an enlarged scrotum of 10 cm × 8 cm (Panel A), negative shifting dullness, mildly enlarged spleen, and moderate edema of both lower limbs. Contrast-enhanced computed tomography scans demonstrated mild pleural effusion, shrunken and distorted liver, mild ascites, and splenomegaly. No thromboembolic diseases were found. Hepatitis B virus surface antigen and e antibody IgG were positive. Hepatitis B virus DNA viral load was 3.6×10^6 IU/mL (reference range: $<1.0\times10^3$ IU/mL). On laboratory tests, total bilirubin was 107.9 μmol/L (reference range: 5.1–22.2 μmol/L), albumin was 15.8 g/L (reference range: 40–55 g/L), prothrombin time was 30.8 seconds (reference range: 11.5–14.5 seconds), international normalized ratio was 2.96, NT-proBNP was 268.4 pg/mL (reference range: 0–125 pg/mL), and serum creatine was 77 μmol/L (reference range: 44–133 μmol/L). Child-Pugh score was 12. Model for end-stage liver disease (MELD) score was 26. Intravenous infusion of albumin with oral diuretic and antiviral drugs were given. Nine days later, scrotal edema remarkably disappeared (Panel B). On March 27, 2017, laboratory tests demonstrated that total bilirubin was 130.1 μmol/L, albumin was 31.1 g/L, prothrombin time was 32.5 seconds, international normalized ratio was 3.17, NT-

proBNP was 598.4 pg/mL, and serum creatine was 92.75 μmol/L. Child-Pugh score was 11. MELD score was 27. And then he refused hospitalization and liver transplantation due to poor economic status.

On June 9, 2017, he was re-admitted to our department due to recurrent edema of scrotum. On physical examinations, the shifting dullness was negative, and the volume of scrotum became larger (Panel C). Hepatitis B virus surface antigen and e antibody IgG remained positive. Hepatitis B virus DNA viral load was 2.3×10^4 IU/mL. Laboratory tests demonstrated that total bilirubin was 168.7 μmol/L, albumin was 18.5 g/L, prothrombin time was 28.4 seconds, international normalized ratio was 2.58, NT-proBNP was 712.1 pg/mL, and serum creatine was 118.0 μmol/L. MELD score was 30. He developed the disturbance of consciousness after his hospitalization. On June 9, 2017, his relatives refused hospitalization. On June 26, 2017, he died at home.

Scrotal edema, a rare sign, has been incidentally reported in patients with inferior vena cava thrombus (3), dilated cardiomyopathy (4), end-stage heart failure (5), juvenile dermatomyositis (6), Henoch-Schönlein purpura (7), acute pancreatitis (8), cancer of penis (9), and radiation enteritis (10), etc. In children, scrotal edema is often idiopathic and self-limiting with a low rate of recurrence (11). To our knowledge, few studies reported scrotal edema as a complication of liver cirrhosis (12-17). A scrotal edema might be produced on the basis of the communications between the peritoneal and subcutaneous spaces. As previously reported, scrotal edema might be iatrogenic in most of cirrhotic cases. Some cases developed after abdominal paracentesis (14,15), and others after portacaval anastomosis (16) or laparoscopic cholecystectomy (17). By comparison, the present case might be attributed to an extremely low albumin level. After albumin supplementation and diuretics, scrotal edema disappeared.

In conclusion, we reported a rare case with liver cirrhosis presenting with scrotal edema secondary to hypoalbuminemia. Additionally, recurrent scrotal edema might be an ominous sign for cirrhotic patients' outcomes.

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None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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