A case of abdominal compartment syndrome due to portal vein embolism in liver cirrhosis with multiple renal complications

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Introduction

We report a case of abdominal compartment syndrome due to portal vein embolism in liver cirrhosis (LC) presenting with a complicated clinical course.

Case Presentation

A 62-year-old man with LC caused by chronic Hepatitis B virus infection and a serum creatinine (sCr) level of 0.8 mg/dl had been treated with “tenofovir disoproxil(TDF)” in the department of hepatology. 16 months after the initiation of TDF, his sCr level rose to 2.0 mg/dl over a period of 4 months. With suspicion of TDF-induced renal failure, he was referred to nephrology for further evaluation. On the basis of microscopic hematuria with proteinuria, drug-induced kidney injury and glomerulonephritis including hepatitis associated etiology were suspected and renal biopsy was performed. Pathology showed IgA nephropathy with poor active lesions, and steroid treatment was provided. In spite of this, renal function declined abruptly. In addition, the case was complicated with portal vein embolism and ascites developed, so anticoagulation therapy was started. Considering that this rapid course of renal failure was atypical for IgA nephropathy, other causes were seemed to coexist, such as hepatorenal syndrome (HRS) or abdominal compartment syndrome (ACS) due to ascites from the portal vein embolism. It seemed that both the timing of the increase of ascites and the deterioration of renal function were linked, so we decided to do abdominal paracentesis for the prevention of HRS. After the paracentesis, urinary output increased and renal function was dramatically improved.

Discussion

We report a rare case of ACS due to portal vein embolism in a LC patient. A wide variety of causes should be considered in a case of renal failure coexisting with liver failure. In our case, multifaceted evaluation and careful observation were considered to be effective for diagnosis and treatment.