Fatal Hepatitis C in a Renal Transplant Recipient on Immunosuppression

Rakesh Vasishta*, Nandita Kakkar*, Ajay K Duseja**, Radha K Dhiman**

Departments of *Histopathology and **Hepatology, Postgraduate Institute of Medical Education and Research, Chandigarh – 160012, India

A 45-year-old male admitted with a history of jaundice for 15 days and altered sensorium for 1 day. He was a diagnosed case of chronic kidney disease related to chronic glomerulonephritis in 2007 and had undergone live-related renal transplantation in March 2011.

Pre-transplant work-up was negative for hepatitis B surface antigen (HBsAg), antibody to hepatitis C virus (anti-HCV), and HCV-ribonucleic acid (HCV-RNA). He received anti-thymocyte globulin induction and received initially mycophenolate mofetil, tacrolimus, and corticosteroids

Figure 1

Figure 2

Figure 3

Figure 4

(Answer on page 199)

Keywords: Cholestasis, immunosuppression, organ transplantation, viral hepatitis

Received: 14.06.2012; **Accepted:** 19.06.2012

Address for correspondence: Rakesh Vasishta, Department of Histopathology, Postgraduate Institute of Medical Education and Research, Chandigarh – 160012, India

E-mail: rkpsdhiman@hotmail.com

Abbreviations: HBsAg: hepatitis B surface antigen; HCV: hepatitis C virus; RNA: ribonucleic acid; TAC: tacrolimus

doi: 10.1016/S0973-6883(12)60109-1

Figure 5

as immunosuppression; later he had been on TAC, azathioprine, and corticosteroids for 8-months. Jaundice was associated with high-colored urine, clay-colored stools, and pruritus. There was no history of pain abdomen, mass in abdomen, abdominal distension, vomiting or upper gastrointestinal bleeding, and seizures or focal neurological deficit. There was no history of blood transfusion, jaundice, diabetes mellitus, hypertension or cardiac illness in the past. He was a non-smoker, non-alcoholic with no history of intravenous drug abuse.

Physical examination at admission revealed mild pallor and deep icterus. Abdomen examination did not reveal any organomegaly or free fluid in the peritoneum. Central nervous system examination revealed grade 2 hepatic encephalopathy (according to West Haven criteria), presence of flapping tremor, and no focal neurological deficit. Other systems examinations were normal.

Investigations on admission revealed normal hemoglobin (13.5 g/dL) and normal total white blood cell count ($5900/\text{mm}^3$) and thrombocytopenia (platelets $68,000/\text{mm}^3$). Liver function tests showed total serum bilirubin 41.7 mg/dL (direct 27.9), serum alanine aminotransferase 106 U/L (normal < 40), aspartate aminotransferase 68 U/L (normal < 40), and serum alkaline phosphatase 200 U/L (normal 140 IU/mL). His international normalized ratio was 3.2. Serological markers for all viral hepatitis (hepatitis A, B, C, E, and cytomegalovirus) were negative, however HCV-RNA level was 65153544 IU/mL.

The patient was treated with antihepatic coma regimen, appropriate antibiotics, injectable vitamin K, proton pump inhibitors, and appropriate life support system. He had progressive worsening of sensorium and developed hypotension. He sustained cardiac arrest and could not be revived. Complete autopsy was performed. Liver histopathology revealed the findings depicted in Figures 1–5 respectively.

What is the diagnosis?