Fulminant Hepatitis Caused by Cytomegalovirus Infection in an Immunocompetent Adult Requiring Liver Transplantation: Report of a Case

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Introduction: Although CMV infection is usually self limiting in healthy adults, on rare occasions and due to still unclear mechanisms, significant complications may occur which include pneumonia, myocarditis, pericarditis, colitis, encephalitis, hemolytic anemia and portal vein thrombosis. Although very rare, there have been reports of severe cholestatic hepatitis caused by CMV in the literature. We present a case of fulminant hepatitis caused by CMV in an immunocompetent adult requiring emergency living donor liver transplantation.

Case Report: A 39-year-old woman presented with fever with 6weeks duration. Initially suspected of having urinary tract infection she was previously treated with antibiotics at an local clinic without improvement of symptoms. However evaluation revealed non-specific findings and the fever was controlled symptomatically. During follow up at the outpatient clinic her liver function test values were severely elevated with aspartate aminotransferase (AST) at 2,349 U/L, alanine aminotransferase (ALT) at 2,897 alkaline phosphatase at 196 U/L. She was again referred to our center with an impression of hepatitis. During admission she showed semicomatous mentality and low prothrombin time (19.9%) with high AST and ALT levels. With an impression of fulminant hepatitis she underwent emergency living donor liver transplantation. Initial postoperative bilirubin was 6.8 mg/dl and showed decreasing levels. After postoperative 5 days her bilirubin level started to increase above 10 mg/dl. Becauase her CMV antigenemia assay showed increasing levels and permanent biopsy revealed massive hepatic necrosis with positive staining for cmv protein, she was treated with a therapeutic dose of ganciclovir after which her LFT started to improve. After 3 months, she was discharged.

Discussion: We report a case of fulminant hepatitis caused by CMV successfully treated with emergency liver transplantation with postoperative gancicolvir therapy. Although very rare, we believe that the possibility of CMV hepatitis should be studied in severe clinical scenarios of hepatitis even in immunocompetent patients after other more prevalent etiologies have been ruled out.