

Bile cast nephropathy after liver transplantation

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Bile cast nephropathy is a rare condition of renal dysfunction related to hyperbilirubinemia. The kidney injury is generally reversible if bilirubin levels are decreased early. Pathohistological findings are a result of bile casts formation and direct bile acids toxicity on renal tissue. Herein, we present a case of bile cast nephropathy after liver transplantation. A 60-year old male underwent liver transplantation (LT) in 2016 due to cryptogenic cirrhosis. Seven months after LT his liver function unexpectedly deteriorated and he developed severe jaundice (bilirubin=415 $\mu\text{mol/L}$) accompanied by acute renal failure (creatinine= 190 $\mu\text{mol/L}$). A liver biopsy revealed an acute injury of unidentified aetiology, while the renal findings indicated bile cast nephropathy with nephroangiosclerosis and fibrosis. The treatment included plasmapheresis which resulted in partial recovery of renal and liver function. However, in proceeding weeks patient's liver function deteriorated (bilirubin=501 $\mu\text{mol/L}$; AST=267IU/L; ALT=503IU/L), and due to unidentified liver failure, the patient was retransplanted. His renal function partially improved with resolving hyperbilirubinemia following LT (creatinine=145 $\mu\text{mol/L}$). He was discharged from the hospital with normally functioning graft and improved but still impaired kidney function. There are only a few reported cases of this condition described in the literature and aetiology of this condition is still not completely understood. The presented case report demonstrates the particular background of bile cast nephropathy and the subsequent treatment. Though, we emphasize the need for further investigations of this condition, as well as the established treatment guidelines.