A 24-year old female with indeterminate hyperacute liver failure: a case report

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Introduction: Acute Liver Failure (ALF) refers to sudden massive hepatic necrosis with encephalopathy and impaired synthetic function without pre-existing cirrhosis. Chronicity is based on interval between jaundice and encephalopathy onset as hyperacute (< 7 d), acute (7-28 d) and subacute (4-26 wks.).

Case Description: A previously healthy 24-year old female with a history of lacrimal gland tumor on chronic oral prednisone (40mg) for a year was admitted for acute decreased sensorium, generalized jaundice, tea-colored urine, anorexia and undocumented fever.

Results: Laboratory findings showed hyperbilirubinemia (total bilirubin 13.26, direct bilirubin 10.68, indirect bilirubin 2.58), transaminitis (ALT 5507, AST 3549), elevated alkaline phosphatase (195), impaired coagulation hyperammonemia and normal platelets. Extensive work-up including hepatitis panel, paracetamol, methamphetamine, cannabinoids, benzodiazepene, barbiturates, cocaine, opiates, phenylcyclidine, cytomegalovirus IgM, EBV, HSV1, HSV2, C3, anti-Sm and anti-mitochondrial antibody, LKM1, cerulopalsmin, strepA throat screen test, malarial smear and leptospiral IgM were all unremarkable. Whole abdominal ultrasound revealed unremarkable liver, biliary tree and pancreas, with splenomegaly 13 x 14.5cm. Medical and supportive treatment were promptly provided. Orthotopic liver transplantation (OLT) was contemplated, however, cerebral edema and hemorrhage ensued on Day 5 leading to demise.

Discussion: Etiology varies widely among toxic, viral, metabolic and vascular insults. There are rare reports of ALF with repeated steroid administration. Management consisting of intensive care should be initiated depending on the etiology and chronicity of ALF. OLT has emerged as the only therapeutic intervention with proven benefit for patients with advanced ALF.

Conclusion: Management of ALF is challenging due to rapid progression of disease and frequently poor prognosis. We report a case of indeterminate hyperacute liver failure in a healthy young female. Despite extensive work-up and prompt intensive medical management, rapid clinical deterioration ensued. History of chronic steroid use might be a precipitant, as supported by few case reports.

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