Predicting Prognosis in Submassive and Massive Hepatic Necrosis

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Biopsy-confirmed submassive or massive hepatic necrosis represents the most disastrous histologic pattern of fulminant liver failure. The prognosis of these patients, in correlation to orthotopic liver transplantation (LT), has not been well evaluated. We retrospectively reviewed 46 native liver biopsies from 37 patients that exhibited submassive or massive hepatic necrosis. Clinicopathologic features, including the extent of necrosis, etiology, and status of LT were studied. Causes of hepatic necrosis included hepatitis A/B/C virus in 9 patients, drug toxicity in 10, autoimmune hepatitis in 14, and unknown origin in 4. 11 patients had submassive necrosis (1 with 25%-50% and 10 with 51%-75%), and 26 had massive necrosis (76%-100%). Regardless the option of LT, higher-degree necrosis is associated with worse prognosis. The patients who received LT had better survival rates compared with non-LT ones (100% vs 71% and 64% vs 40% in 51%-75% and 76%-100% necrotic groups, respectively). Without LT, the survival rates were 67%, 57%, and 25% in groups of AIH, drugs, and viral hepatitis, respectively. Even after LT, the survival rate in patients as a result of viral hepatitis was lowest compared with the others. Extent of necrosis is an independent predictor for prognosis. LT is a lifesaving management for patients who have submassive or massive hepatic necrosis irrespective the underlying etiology. Even after LT, patients who had submassive/massive hepatic necrosis due to viral hepatitis had poor prognosis compared with those caused by drugs or autoimmune hepatitis.

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