

Prophylactic phenytoin does not improve cerebral edema or survival in acute liver failure—a controlled clinical trial.

Abstract:

Seizure activity in patients with acute liver failure (ALF) may increase cerebral oxygen requirements and worsen cerebral edema. Recently, prophylactic phenytoin has been recommended to suppress sub-clinical seizure activity evident on electroencephalographic monitoring. To determine the clinical utility of prophylactic phenytoin therapy in patients with ALF. **METHODS:** Forty two patients with ALF were randomized. Twenty two patients were given prophylactic phenytoin and 22 patients acted as controls. The baseline clinical and biochemical features were similar in the two groups and patients with ≥ 2 poor prognostic variables were equally represented. **RESULTS:** Sixteen patients in the phenytoin group, and 15 in the control group developed cerebral edema ($P=0.38$). Mechanical ventilation was required in 10 and 12 patients in the phenytoin and control groups, respectively, ($P=0.77$). Seizures occurred in 5 (22.7%) control patients and 5 (25%) phenytoin treated patients ($P=0.86$). Fourteen (70%) patients randomized to phenytoin and 15 (68.2%) control patients died ($P=0.89$). **CONCLUSIONS:** Seizure was common in patients with ALF. Prophylactic use of phenytoin did not prevent cerebral edema, seizures or need for mechanical ventilation, and did not improve survival.