Neurological complications of liver transplantation in pediatric patients: a single center experience.

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Source

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Abstract

Neurologic complications (NCs) are a significant cause of morbidity and mortality in patients who undergo liver transplantation (LT). The aim of this study was to evaluate the incidence and type of NCs and associated factors in pediatric LT patients. We retrospectively reviewed NCs in the medical records of 40 consecutive infants, children, and adolescents who underwent LT at our institution. The subjects consisted of 23 boys and 17 girls (median age, 8.5 +/- 0.85 yr; range, 11 months to 17 yr). The indications for LT were Wilson’s disease in 10 patients, fulminant hepatic failure (FHF) in nine, and other types of chronic liver disease in 21. NCs were found in 14 patients (35%). Those 14 individuals experienced a total of 16 episodes of NCs (two separate episodes in two of the patients). The most common NCs were seizure (seven episodes in six patients) and posterior leukoencephalopathy syndrome (PLES; five episodes in four patients). Seizure was the presenting symptom in three episodes of PLES. Two episodes of diffuse encephalopathy were observed in two patients, and two episodes of psychiatric symptoms occurred in two patients. We also noted one episode of tremor in one patient, one episode of acute dystonic reaction in one patient, and one episode of headache in one patient. Patients with Wilson’s disease had a higher incidence of NCs (60%) than did patients without Wilson’s disease (26.7%); however, this difference was not significant. The incidence of NCs was 44% in patients with FHF and 35% in those without FHF. That difference also was not significant. Immunosuppressive agents were the primary cause of 13 of the 16 episodes of NC. Uremia with hypertension, hypoxia, and hypomagnesemia caused one neurologic episode each. NCs, which are frequent in the first 30 days after pediatric LT, did not affect survival in this group. NCs were reversed by the discontinuation or reduction of immunosuppressive agents in 12 episodes, correction of hypomagnesemia and the reduction of immunosuppressive agents in one episode, and the correction of uremia and hypertension in one episode. Refractory epilepsy developed in one patient, and death unrelated to NCs occurred in one. The mortality rate was 7.1% (n = 1) in patients with NCs and 15.4% (n = 4) in those without NCs (p = 0.64). NCs are an important complication after LT. It is essential that each transplantation team collaborate with pediatric neurologists to ensure the rapid and accurate diagnosis of NCs in infants, children, and adolescents after LT and to prevent the delay of appropriate treatment.