LORAZEPAM IN TREATMENT OF CONVULSIVE STATUS EPILEPTICUS IN CHILDREN: A RANDOMIZED CONTROLLED TRIAL

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Objective: To compare the efficacy of lorazepam versus diazepam-phenytoin combination in the treatment of convulsive status epilepticus. Study Design: Randomized controlled trial. Setting: Emergency unit of a tertiary care center. Subjects: 178 children (1-12 years) with continuous convulsive activity lasting for 5 minutes or more. Children with head trauma, liver failure, dyselectrolytemia, uremia, poisoning; or having received any antiepileptic medication in the preceding 4 weeks, were excluded. Intervention: Intravenous lorazepam 0.1 mg/kg (n =90) or diazepam (0.2 mg/kg)-phenytoin(15 mg/kg) combination (n = 88). Primary Outcome Measure: Success rate of therapy (cessation of all clinical evidence of seizure activity within 10 minutes of the intervention and no recurrence over next 18 hours). Results: The overall success rate of therapy was 100% in both the groups. There was no statistically significant difference in the two groups in the mean (SD) time taken to stop the seizure [lorazepam 19.2 (4.4) seconds and diazepam-phenytoin 19.9 (4.9) seconds]; the number of subjects requiring more than one dose to stop the presenting seizure [lorazepam 6(6.7%) vs diazepam-phenytoin: 14 (15.9%); adjusted RR (95% CI) = 0.377 (0.377, 1.064); P = 0.061]; and the number (%) of patients having respiratory depression [lorazepam 4(4.4%) vs diazepam-phenytoin 5 (5.6%)]. None of the patient in the two groups required additional anticonvulsant to stop the presenting seizure; transfer to the ICU for mechanical ventilation; or crossover to the alternative regimen. Conclusion: Lorazepam is as efficacious and safe as diazepam-phenytoin combination to control the initial seizure in convulsive status epilepticus in children.