Title: Lorazepam for the Prevention of Recurrent Seizures Related to Alcohol

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Background: Alcohol abuse is one of the most common causes of seizures in adults. Only a few studies have addressed the treatment for prevention and recurrent seizures related to alcohol in patients in the emergency department. Alcohol itself may induce seizures or exacerbate preexisting epilepsy. Also people who chronically use alcohol have an increased frequency of structural abnormalities in the brain that may contribute to seizures. Phenytoin does not prevent recurrent alcohol-related seizures. Benzodiazepines had been used in the acute alcohol syndrome and have been, in fact, have been preventing seizures. Lorazepam is distributed in the tissues less rapidly and less extensively than Diazepam and, therefore, its ability to control seizures is prolonged.

Objective: To test the efficacy of Lorazepam to reduce the occurrence of a second seizure during the observation period.

Type of Article:

Study:

Design: Randomized double-blind study.

Setting: The patients were adults who presented to teaching hospitals in Boston over a 21-month period who had had a witnessed, generalized seizure and who had one or more drinks in the previous 72 hours prior to enrollment.

Patients: The patients were excluded after enrollment if they required treatment for moderate to severe withdrawal other than seizures or also excluded if they were using other drugs that cause seizures, including cocaine or if they were on any epileptic agent such as phenobarbital (Phenytoin was not an exclusion drug).

Intervention: 2 mg of Lorazepam or normal saline was administered in the emergency room. Outpatients had their serum glucose measured and were given thiamine, magnesium, as well as a IV hydration.

Outcomes measured: Recurrence of another seizure.

Main results or findings: A total of 186 patients met the criteria for study entry was included in the intention-to-treat analysis. 86 patients were assigned to receive placebo and 100 patients were assigned to receive Lorazepam. 24 patients or 13% had a second seizure, 21 of those 24 were in the placebo group and 3 were in the
Lorazepam group. There were no complications related to the administration of Lorazepam.

**Conclusion:** Intravenous Lorazepam significantly reduces the risk of recurrent seizures related to alcohol with no complications found in the study.

**Commentary: (Impact on Internal Medicine).** For the internist who works as a hospitalist or in an acute emergency setting, the presentation of seizures and alcoholism is common. The use of one dose of Lorazepam significantly reduces the risk of a second seizure. The generalizeability of this evidence is limited by: 1) patients with moderate to severe alcohol withdrawal were excluded, and 2) the use of any concurrent drug abuse. It does provide excellent evidence in support of the use of Lorazepam in a screened study population but further studies will need to address the clinical connotations.