Title: Phenobarbital compared to lorazepam for the treatment of alcohol withdrawal

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Objective

The objective is to determine the impact phenobarbital (PHB) has on the rate of intensive care unit (ICU) admission compared to lorazepam (LOR) for patients experiencing acute alcohol withdrawal.

Methods

To compare clinical effectiveness of PHB compared to LOR, a retrospective chart review was performed of 60 adult patients at a community teaching hospital treated with a symptom driven alcohol withdrawal protocol utilizing the Clinical institute Withdrawal Assessment for Alcohol scale (CIWA-Ar). Patients were excluded if they left against medical advice within 24 hours of presentation or received benzodiazepines or phenobarbital as maintenance medication outpatient. Outcome measurements collected included patient demographics, all protocol doses given, ICU and hospital length of stay (LOS) in days, respiratory intervention, use of adjunct medications, and mortality. Baseline comparisons were performed using the Fishers exact test for equal proportions with results reported as numbers, percentages, and 95% confidence intervals. Non-normally distributed parameters were compared using Wilcoxon rank sum tests reported as medians and interquartile ranges.

Results

Baseline characteristics differed between groups with PHB patients more likely to be male and overweight. There was no difference in ICU admission (LOR 17%, PHB 30%, p = NS), ICU LOS (LOR {n = 5} 5.6 [3.9-7.0], PHB {n = 9} 5.6 [2.1-7.2], p = NS), hospital LOS (LOR 5.9 [2.9-10.1], PHB 4.5 [3-12.3], p = NS), respiratory intervention (LOR 7%, PHB 20%, p = NS), or mortality (LOR 3%, PHB 3%, p = NS). There was no difference in number of treatment doses (LOR 10 [6-21.5], PHB 10 [5.8-13], p = NS) or days of treatment (LOR 2.5 [1.2-5.0], PHB 1.6 [1.2-2.8], p = NS). Those managed with a PHB protocol had a statistically significant higher requirement of adjunctive agents (LOR 3%, PHB 37%, $p < 0.01$) with the most common agent being haloperidol.

Conclusion

To date there has been minimal data comparing phenobarbital to benzodiazepines for symptom driven treatment of alcohol withdrawal. These results show that both phenobarbital and lorazepam adequately treat alcohol withdrawal using a symptom driven protocol without any significant difference in patient safety outcomes. In the setting of a drug shortage or patient intolerances, phenobarbital symptom-triggered protocol provides an alternative treatment option with a comparable safety profile.