Treatment of Alcohol Withdrawal Syndrome
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In alcohol withdrawal patients, is adding phenobarbital to the CIWA protocol more effective than the current practice of using lorazepam to treat alcohol withdrawal syndrome?

**Purpose**

The purpose of this project was to find out if Phenobarbital, a barbiturate drug used to prevent and/or treat seizures, is more effective in the treatment of alcohol withdrawal syndrome than the current practice of using lorazepam.

**Background/Significance of the Problem**

- 7.4% of Americans self-report dependence on alcohol while 18-25% of patients admitted to the hospital with alcohol use disorders develop alcohol withdrawal syndrome, or AWS (Berry et al., 2014).
- Although there is no formal guideline published for the treatment of AWS, benzodiazepines, such as lorazepam, are widely used in its treatment based on scoring with the Clinical Institute Withdrawal Assessment for Alcohol, or CIWA (Bacon et al., 2016).

**Literature Review**

- A single dose of Phenobarbital combined with a symptom-guided lorazepam-based alcohol withdrawal protocol resulted in decreased ICU admission and did not cause increased adverse outcomes (Alter et al., 2013)
- The use of a Phenobarbital for alcohol withdrawal symptoms was associated with a significant reduction in ICU Length of stay (Canonico et al., 2018)
- More patients were discharged within three days if they received a single parenteral dose of Phenobarbital on hospital day one, in addition to symptom-triggered lorazepam for the acute management of AWS (Ibarra, 2019)
- The use of lorazepam and Phenobarbital together may lead to a decreased ICU length of stay, decreased time spent on mechanical ventilation, and decreased lorazepam requirements; more research is needed (Berry et al., 2014).
- Phenobarbital and lorazepam were similarly effective in the treatment of mild/moderate alcohol withdrawal in the ED and at 48 hours (Barnes et al., 2011).

**Recommendations**

In most of our research there was not enough information about the use of Phenobarbital alone, however the studies reviewed did have positive outcomes in regard to including Phenobarbital to the alcohol withdrawal treatment regimen. In future research there should be a focus on how effective Phenobarbital is on it’s own. Most common recommendation for future studies is that we expand the research. The research was often limited to small sample sizes and limited variety of patients, thus future research should include larger sample sizes and increased variety of patients. Variety of patients should include different genders and ages and severity of symptoms. Research should also be of higher quality and level. More research also needs to be done to show the optimal amount of Phenobarbital that should be used for different severities of alcohol withdrawal or patient weights in order to standardize the research as well.