Benzodiazepine Sparing Alcohol Withdrawal Protocol Pilot in post surgical head and neck cancer patients

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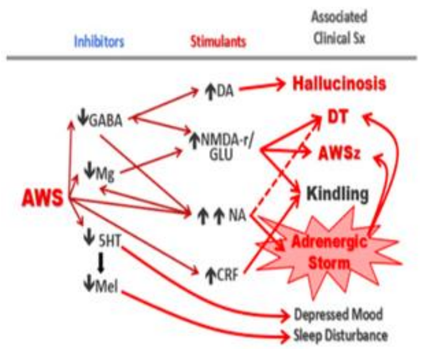
Introduction

Alcohol use disorder is seen in about one third of patients admitted to the intensive care unit and is associated with high rates of morbidity and mortality (3.) Patients with head and neck cancer have rates of comorbid alcohol use as high as 30-60%, which can complicate recovery (1). Traditionally, withdrawal is managed by assessing symptoms with the Clinical Institute Withdrawal Assessment (CIWA) and treating with as needed benzodiazepines or monitoring a benzodiazepine taper. Benzodiazepines perpetuate neurotransmitter dysregulation in alcohol withdrawal, but valproic acid can correct dysregulations of glutamic and GABAergic systems (2).



Maldonado, J. R. (2017). Novel algorithms for the prophylaxis and management of alcohol withdrawal syndromes–beyond benzodiazepines. *Critical care clinics*, *33*(3), 559-599.

StudyDesign

- **IRB Number**: **20-1106**
- **Hypothesis:** A benzodiazepine sparing protocol is an effective tool for preventing complications for alcohol withdrawal including encephalopathy, delirium tremens, seizures.
- **Research Protocol:** Comparison Retrospective Chart Review between patients treated with a benzodiazepine sparing protocol and those who received treatment with a traditional benzodiazepine taper.

Benzodiazepine Sparing Protocol

Benzodiazepine Sparing Protocol			
Primary Agent (based on renal/hepatic function)	Mild risk	Moderate risk	Severe risk
Gabapentin	300 mg TID x 5 days	400 mg TID x 5 days	600 mg TID x 5 days
Valproic Acid	250 mg TID x 5 days	500 mg TID x 5 days	750 mg TID x 5 days
Augmentation with Clonidine 0.1 mg Q8 hours and melatonin 3 mg daily at 8 PM			
Ativan 2 mg and Haldol 5 mg available for acute agitation			
For severe, refractory cases – provision for phenobarbital, dexmedetomidine			
Nutritional repletion with thiamine, folate, multivitamin			

GB1	Sex	Age	Diagnosis on Admission/Surgery	Alcoholic Diagnosis	Length of stay	Highest CIWA score	Alcohol withdrawal treatment	Delirium Diagnosis	Code Violet
Patient 1	Male	59	Squamous cell carcinoma on glottis and has a tracheoesophageal fistula	Alcohol dependence, uncomplicated	11	2	Lorazepam 0.5 mg twice	None	none
Patient 2	Male	70	Total laryngectomy	Alcohol dependence with withdrawal, unspecified	28	6	Lorazepam 1-4 mg daily	Yes	None
Patient 4	Female	58	Closure of pharyngocutaneous fistula and tissue rearrangement	Alcohol dependence, uncomplicated	7	8	Diazepam5 -15 mg the first two days, Gabapentin	Yes	Yes
Patient 7	Male	68	Squamous cell carcinoma of oral cavity and tracheotomy	Alcohol dependence, uncomplicated	12	0	Gabapentin 300 mg at bedtime	No	No
Patient 8	Male	60	Left Tonsillectomy, left neck dissection, mucosal arrangement	Alcohol dependence with withdrawal, unspecified	5	4	Lorazepam 4 mg one day	No	No
Patient 10	Male	59	Oropharynx cancer, direct laryngoscopy	Alcohol dependence, in remission	7	4	Gabapentin 200-600 mg daily	No	No

Population After Intervention

GB1	Sex	Age	Admission Diagnosis	Alcohol Use Diagnosis	Length of Stay	Highest CIWA	Alcohol withdrawal treatment	Use of benzo's?	Delirium	CIT
Patient 1	Male	57	Total Laryngectomy, Cricopharyngeal Myotomy, Bilateral Selective Neck Dissections	**Alcohol use disorder, severe, dependence**	10	17	Gabapentin 100-2400 mg a day	No	Yes, before intervention	No
Patient 2	Male	53	Resection of mouth cancer	Alcohol abuse	8	5	Gabapentin 600 at bedtime Valproic Acid 250, 250, 500 mg	No	No	NO
Patient 3	Male	58	Anterior Glossectomy, tracheostomy, madubulectomy	Alcohol use disorder, severe in withdrawal	8	5	Valproic Acid 250 mg BID, Gabapentin 300 mg qhs,	Yes, 1 time dose of lorazepam 1 mg IM – for agitation following detox	No	NO
Patient 4	Male	58	Left composite gingivobuccal resection and mandibulectomy	Alcohol abuse	20	6	Valproic Acid 250 mg qam and 500 mg qhs	No	Yes	No
Patient 5	Male	66	Total Laryngectomy, total pharyngectomy, cervical esophetomy, left heithyroidecotmy	Alcohol use disorder, in early remission	9	4	Valproic Acid 250 mg TID, Gabapentin 300 mg qhs	No	Yes- before intervention!	No
Patient 6	Male	69	Laryngectomy	Alcohol use disorder	16	3	Gabapentin 300 mg qhs	No	No	No
Patient 7	Male	42	Tracheostomy	Alcohol intoxication, Alcohol withdrawal seizures	8	0	Valproic Acid 500 mg TID, Neurontin 300 mg TID	No	No	No

Discussion

Strengths:

- Less delirium diagnoses
- No Code Violets (behavioral codes for agitation)
- Lower CIWA scores, no utilization of benzodiazepines

Weaknesses:

- Low power (pilot/proof of concept analysis)
- Have not incorporated standard severity measure

Plans for Future

- Incorporate PAWSS to formally stratify severity
- Educate primary services on implementation and use of the protocol for broader study
- Move away from CIWA to follow withdrawal severity

References available upon request