Examining the Effectiveness of Education Provided to Student Registered Nurse Anesthetists’ (SRNA) Regarding Pre-Operative Administration of Midazolam in Patients with Post-Traumatic Stress Disorder (PTSD)

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BACKGROUND

- Post-traumatic stress disorder (PTSD) is identified as a mental health condition in which a traumatic event causes a “clinically significant distress or impairment in the individual's social interaction, capacity to work, or other important areas of function” (American Psychiatric Association [APA], 2013).
- 3.5% of the United States’ population is coping with the disorder throughout their daily lives and upwards to one in 11 people may suffer from the condition within their lifetime (APA, 2020).
- Evidence-based guidelines over how to appropriately manage PTSD patients perioperatively to reduce incident of emergence delirium are limited.

REVIEW OF LITERATURE

- An integrated research review (IRR) was completed to examine the most current literature to determine if a relationship between PTSD patients, preoperative administration of midazolam, and an increased incidence of emergence delirium could be extrapolated.
- Inclusion criteria used to identify potential articles related to findings between midazolam and emergence delirium, and post-traumatic stress disorder and emergence delirium.
- CINAHL, PubMed, and ScienceDirect databases were utilized for the search of articles published from years 2014 through 2020.
- In total, 10 articles met inclusion criteria for use in the integrated research review.

FINDINGS

- A connection exists between the preoperative administration of benzodiazepines, including but not limited to midazolam, and a higher risk for experiencing emergence delirium in the adult population.
- Adult patients with PTSD are at a higher risk for developing emergence delirium.
- There remains a need to collect empirical research that addresses best practice recommendations to decrease the occurrence of emergence delirium in high-risk populations (Lovestrand et al., 2017).

METHOD

- Subjects consisted of current SRNAs attending Union University that were voluntarily recruited via email.
- Participants were instructed to complete the pre-test, review the PowerPoint presentation, and then complete the post-test.
- The overall scores from the pre-test and post-test were compared to determine if a significant difference in scores existed between the tests.

RESULTS

- In total, ten participants (n=10) successfully completed the pre-test and post-test. A paired-sample t-test was conducted to compare the scores obtained by participants on the pre-test and post-test. There was a significant difference in the scores for the pre-test (M=5.40, SD = 0.84) and the post-test (M = 7.90, SD = 1.29); t(9) = 11.18, p = <0.0001.

Paired Samples Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test Scores</td>
<td>5.40</td>
<td>10</td>
<td>0.84</td>
<td>0.27</td>
</tr>
<tr>
<td>Post-Test Scores</td>
<td>7.90</td>
<td>10</td>
<td>1.29</td>
<td>0.41</td>
</tr>
</tbody>
</table>

Paired Samples t-Test

<table>
<thead>
<tr>
<th>Mean Difference</th>
<th>95% Confidence Interval of the difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-TDTA-PDTA</td>
<td>-2.50</td>
<td>-3.01 to -2.00</td>
<td>-9.99</td>
<td>&lt;0.0001*</td>
</tr>
</tbody>
</table>

“Behold, I will bring to it health and healing, and I will heal them and reveal to them abundance of prosperity and security.”

Jeremiah 33:6, ESV

REFERENCES


Management of emergence delirium and perioperative pain management.