Effects of Home Antipsychotic Reinitiation in ICU Patients with a History of Mental Illness

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Conflict of Interest

► Nothing to disclose
Learning Objectives

- Review the vital sign parameters affected by antipsychotic medications
- Discuss the potential advantages of continuing home antipsychotics in the intensive care unit (ICU)

Pre-Assessment Question

What is one potential advantage of restarting home antipsychotics upon admission to the ICU?

A. Increased length of stay
B. Decreased use of benzodiazepines
C. Increased dosage of sedatives
D. Decreased usage of non-benzodiazepine sedatives
Pre-Assessment Question

- Which of the following parameters may require additional monitoring while on antipsychotic therapy in the ICU?
  A. Blood pressure
  B. Oxygen saturation
  C. EKG
  D. Heart rate

Background
Mental Illness in Critical Care Units

- 50% of the critically ill population have a history of mental illness.
- Higher rates of chronic illnesses such as COPD, diabetes, and cardiovascular disease in mentally ill population.
- The strong correlation between medical morbidity and mental illness suggests that providers will care for patients with various psychiatric disorders.

Antipsychotics and Critically Ill Patients

- Vital signs typically evaluated in critical care include:
  - Temperature
  - Oxygen saturation
  - Heart rate
  - Respiratory rate
  - Blood pressure
- Antipsychotics do not acutely affect any of these parameters in the ICU.
- Additional monitoring may be required for:
  - Acute cardiac events due to potential prolongation of QT interval
  - Acute traumatic brain injury due to changes in neurological functioning.
Antipsychotics in Critical Care

- Approximately 10% to 15% of patients hospitalized in the ICU will require reduction or discontinuation of home psychotropic medications.

- In many cases, a patient’s chronic medications are discontinued upon admittance to the intensive care unit.

- Abrupt discontinuation of psychotropic medications can lead to serious complications including acute destabilization of mental illness.

- Evidence suggests rapid onset psychosis may occur in approximately 20% of abrupt antipsychotic discontinuations.

Possible Risks of Abrupt Antipsychotic Discontinuation

- Rapid onset psychosis

- Increased agitation/combative ness

- Less adherence to treatment plan

- Increased usage of as needed (PRN) medications such as benzodiazepines and antipsychotics

- Increased length of stay

Study Design/Methodology

Study Setting

St. John Medical Center
Tulsa, OK
Study Questions

- Do patients who restart antipsychotics upon admission to the ICU have similar rates of agitation when compared to those who do not?

- Do patients who restart antipsychotics upon admission to the ICU utilize as many doses of PRN medications as those who do not?

Inclusion/Exclusion Criteria

Inclusion
- Ages 18-65 years old
- History of psychotic mental illness
- Receiving home antipsychotics
- An order for PRN benzodiazepines or antipsychotics

Exclusion
- History of seizures
- Active substance abuse
- Detoxification protocols ordered
- Traumatic brain injury
- Utilizing continuous benzodiazepine infusions
Data Collection

- Age
- Gender
- Psychiatric diagnosis
- Number of agitation episodes daily
- Total number of benzodiazepine doses
- Total number of antipsychotic doses
- Total daily dose of benzodiazepines in diazepam equivalents
- Total daily dose of antipsychotics in chlorpromazine equivalents

Patient Population

<table>
<thead>
<tr>
<th></th>
<th>Antipsychotic Restarted n=54</th>
<th>Antipsychotic Not Restarted n=46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age in Years</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>62% (33)</td>
<td>54% (25)</td>
</tr>
<tr>
<td>Diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>60% (32)</td>
<td>50% (23)</td>
</tr>
<tr>
<td>Schizoaffective Disorder</td>
<td>20% (11)</td>
<td>20% (10)</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>16% (9)</td>
<td>13% (6)</td>
</tr>
<tr>
<td>Psychotic Depression</td>
<td>4% (2)</td>
<td>3% (1)</td>
</tr>
<tr>
<td>Unspecified Psychosis</td>
<td>0% (0)</td>
<td>14% (6)</td>
</tr>
</tbody>
</table>
### Results

#### Data

<table>
<thead>
<tr>
<th></th>
<th>Antipsychotic Restarted n=54</th>
<th>Antipsychotic Not Restarted n=46</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average daily agitation episodes</td>
<td>1.91</td>
<td>4.66</td>
<td>0.036</td>
</tr>
<tr>
<td>Average daily benzodiazepine doses</td>
<td>1.39</td>
<td>2.73</td>
<td>0.039</td>
</tr>
<tr>
<td>Average daily antipsychotic doses</td>
<td>0.65</td>
<td>1.77</td>
<td>0.014</td>
</tr>
<tr>
<td>Average daily diazepam equivalents</td>
<td>5.74</td>
<td>9.68</td>
<td>0.013</td>
</tr>
<tr>
<td>Average daily chlorpromazine equivalents</td>
<td>50</td>
<td>62.5</td>
<td>0.048</td>
</tr>
</tbody>
</table>
Conclusions

- Restarting home antipsychotics upon admission to the ICU is beneficial in reducing the amount of agitation a patient experiences.

- Home antipsychotic use during ICU stay was associated with an average of 3 fewer agitation episodes per day.

- Patients in this study who restarted home antipsychotics utilized fewer doses and lower total daily doses of both benzodiazepines and antipsychotics during their ICU stay.

Limitations

- Retrospective review

- Small number of patients

- Heterogeneous patient population
Impact at Institution – In Works

- Educational session with ICU staff regarding the importance of antipsychotic reinitiation as soon as safely possible

Post Assessment Question

What is one potential advantage of restarting home antipsychotics upon admission to the ICU?

A. Increased length of stay

B. Decreased use of benzodiazepines

C. Increased dosage of sedatives

D. Decreased usage of non-benzodiazepine sedatives
Post Assessment Question

► Which of the following parameters may require additional monitoring while on antipsychotic therapy in the ICU?

A. Blood pressure
B. Oxygen saturation
C. EKG
D. Heart rate

Acknowledgements

► Alex Cobb, PharmD, BCPS, BCCCP
► Emily Gray, PharmD, BCPP
► Nancy Brahm, PharmD, BCPP
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