Benzos for Frenzos…or On-Scene Ketamine

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The Old Friend

• Benzodiazepines
  – Midazolam, Lorazepam, Valium

• The antipsychotics
  – Haloperidol, Droperidol
The New Cool Kid

- Ketamine
- Huge uptick in use in Emergency Departments
- Seeing this transition into EMS
- Growing literature looking at its use
BUT WHICH KID IS COOLER??
Ketamine vs. Midazolam

• Head to Head
• Look at effect
  – Blood pressure
  – HR
  – RR
  – Need for Ventilatory support
    ▪ BVM, SGA, Intubation
What Did We Find

48 Included

26 Ketamine

22 Midazolam
## What We Found

### Table 2: Student T-test results between Drug Groups (Midazolam vs. Ketamine).

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
<th>SE</th>
<th>P-value</th>
<th>95% CI Lower-Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-7.50</td>
<td>3.73</td>
<td>0.51</td>
<td>-15.01</td>
</tr>
<tr>
<td>Sex</td>
<td>-7.50</td>
<td>3.69</td>
<td>0.72</td>
<td>-0.32</td>
</tr>
<tr>
<td>Delta SBP (mmHg)</td>
<td>1.66</td>
<td>4.93</td>
<td>0.43</td>
<td>-27.47</td>
</tr>
<tr>
<td>Delta DBP (mmHg)</td>
<td>-1.15</td>
<td>5.07</td>
<td>0.82</td>
<td>-11.35</td>
</tr>
<tr>
<td>Delta HR</td>
<td>1.66</td>
<td>4.99</td>
<td>0.74</td>
<td>-8.27</td>
</tr>
<tr>
<td>Delta O2 Sat</td>
<td>3.00</td>
<td>1.82</td>
<td>0.11</td>
<td>-0.67</td>
</tr>
</tbody>
</table>

### Table 3: Correlation between drug used and need for airway intervention

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>0.984</td>
<td>1</td>
<td>0.321</td>
</tr>
</tbody>
</table>
What We Concluded

• No Significant difference in treatment groups with regards to vital signs
• NO DIFFERENCE IN NEED FOR AIRWAY INTERVENTIONS BETWEEN GROUPS
• Ketamine is a safe alternative to Midazolam in the prehospital environment
Where It Needs To Go

• What about the hospital outcomes?
• Is there a difference in:
  – Efficacy
  – Need for airway maneuvers
  – Length of ED Stay
  – Need for Hospitalization