Does Objective Adherence Data Match what Patients Report when asked about their AED Adherence?

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Background

• AED adherence is a major step in achieving the goal of reduced seizure burden in patients with epilepsy
• Decreased AED adherence is associated with increased morbidity & mortality (Faught, et al. 2008)
• One objective measure of adherence is the Medication Possession Ratio (MPR)
  • Calculated from pharmacy refill records
  • Typically between 0 and 1
  • Closer to 1 = ↑ adherence
  • MPR >0.8 considered “Adherent”
• Preliminary MPR data (ongoing project) raised concerns about our outpatient clinic population
  • Objective adherence data (MPR) did not match what patients stated when asked about their adherence (subjective adherence)

Objective

• To determine if a gap exists in subjective and objective measures of AED adherence

Support

• Partial support from OSU College of Pharmacy Undergraduate Research Scholarship (ED) and Community Pharmacist Foundation

Methods

• Cross-sectional study in 27 patients with epilepsy recruited from outpatient clinic appointment
• Subjective & objective adherence (ADH) data were compared
• During clinic interviews, patients asked to self-assess their AED adherence (subjective measure of adherence)
• Objective measure of adherence (MPR) calculated using 6-month refill records after contacting community pharmacy

Results

<table>
<thead>
<tr>
<th>Patient Demographics</th>
<th>N</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>35.2 (± 11.2)</td>
<td></td>
</tr>
<tr>
<td>Male : Female</td>
<td>10 : 17</td>
<td></td>
</tr>
<tr>
<td>AED Monotherapy</td>
<td>14 (52%)</td>
<td></td>
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<tr>
<td>Patients with seizures in last 30 days</td>
<td>18 (67%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient Demographics</th>
<th>ADH</th>
<th>Non-ADH</th>
</tr>
</thead>
<tbody>
<tr>
<td>AED Therapy Mono Poly</td>
<td>44% 56% 69% 31%</td>
<td></td>
</tr>
<tr>
<td>Yes No</td>
<td>64% 36% 64% 36%</td>
<td></td>
</tr>
</tbody>
</table>

Summary

• Despite 100% of patients stating they were "adherent", 41% were "non-adherent" when evaluated by an objective measure (MPR)
  • Not explained by drug burden or recent seizure activity
  • Reason for gap between objective & subjective adherence is unclear
Factors could include:
  • Patients not completely truthful
  • Limitations in MPR calculations
    • lack of sensitivity to change in AED doses (e.g. tapering dose up or down)
    • patients could use >1 pharmacy

[Graphs and tables representing data on adherence and results]