Relationship Between Opioid Use and Outcomes in Patients Undergoing Basivertebral Nerve Ablation for Chronic Low Back Pain

Alfred Rhyne, M.D., Rick Sasso, M.D., Jeffrey Fischgrund, M.D., Alpesh Patel, M.D., Wellington Hsu, M.D., Av Edidin, Ph.D., Peter Vajkoczy, M.D.
Disclosures

• Drs. Rhyne, Sasso, Fischgrund, and Vajkcozy were clinical investigators in the Relievant Medsystems SMART clinical trial

• Drs. Patel and Hsu were consultants to the SMART trial

• Dr. Edidin is an employee of Relievant Medsystems
Introduction

• Opioid use disorder is of epidemic proportions in the US, with over 20,000 opioid related overdoses in 2015
  • Data indicate further exacerbation of crisis in 2017 compared to 2016

• Opioids may be prescribed to patients with chronic low back pain
  • Deyo et al. (2011) suggest up to 60% of LBP patients receive a prescription for opioids
Methods

• SMART trial investigating the use of BVN ablation to treat CLBP also collected opioid use
  • Approximately 35% of patients reported using short-acting opioids at time of enrollment
    • Opioid use categorized as increased, decreased, or unchanged at each follow-up interval up to one year after treatment
      • Threshold of 10 MME/day

• After categorization, patient reported outcomes (ODI and VAS) as a function of increasing or decreasing opioid dosage were correlated
## Results

<table>
<thead>
<tr>
<th></th>
<th>Increased Opioid Use (n=18)</th>
<th>Decreased Opioid Use (n=27)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ ODI&lt;sub&gt;12 mo.&lt;/sub&gt;</td>
<td>7.3 ± 9.8</td>
<td>24.9 ± 16.0</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Δ VAS&lt;sub&gt;12 mo.&lt;/sub&gt;</td>
<td>0.6 ± 1.8</td>
<td>3.3 ± 2.5</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Discussion

• Patients who reported increased opioid dosage at one year following BVN ablation for treatment of CLBP reported clinically and statistically inferior outcomes compared to those reporting decreased opioid dosage
Summary

• Relationship was observed between decreased opioid use and improvement in ODI and VAS scores in treatment arm patients

• BVN ablation may play a role in modifying opioid use in patients with CLBP