Otitis Media with Effusion: Efficacy of Triple Spray, a Combination Therapy

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Triple Spray therapy demonstrated a statistically significant resolution of otitis media with effusion (OME) when compared to watchful waiting and intranasal steroid sprays alone.

The therapy was utilized in pediatric patients who had OME or middle ear dysfunction and met recommended criteria for medical intervention such as nasal obstruction, turbinate hypertrophy, and allergic rhinitis. We feel this study may be a step toward a new approach to OME treatment in the pediatric population and warrants further investigation.

Objective
OME affects up to 90% of children before school age. Persistent OME can become problematic for the patient and parents and lead to tympanostomy tube placement. To date, no pharmacological intervention has demonstrated superiority to watchful waiting in the resolution of OME while physicians continue to prescribe medications. We reviewed the effectiveness of a combination therapy: Triple Spray [1, 2]

Methods
Retrospective review of pediatric patients (6 months of age to 17 years of age) who presented to our pediatric otolaryngology clinic with OME or eustachian tube dysfunction (ETD) [3]. Three treatment arms were analyzed: watchful waiting, intranasal steroid spray, and Triple Spray

Results
404 patients (208 female and 196 male) met inclusion criteria for the study. Triple Spray demonstrated a statistically significant difference in resolution of OME compared to steroid spray and watchful waiting (table 1)

Moving Forward
- Further analyze our data for age-ranges specific to existing guideline recommendations
- Design a prospective randomized controlled trial to further investigate the benefit of Triple Spray in all pediatric patients with OME

What is Triple Spray?
Triple Spray is a combination therapy of three separate nasal sprays: oxymetazoline, nasal saline, and fluticasone used two times per day in each nostril; after day three oxymetazoline is stopped. The step-wise approach in administration allows decongestion followed by washing/thinning of secretions. This allows improved application of the nasal steroid to the nose and nasopharynx.

<table>
<thead>
<tr>
<th>STUDY ARM</th>
<th>TRIPLE SPRAY</th>
<th>STEROID SPRAY</th>
<th>WATCHFUL WAITING</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL NUMBER</td>
<td>72</td>
<td>118</td>
<td>214</td>
</tr>
<tr>
<td>NUMBER RESOLVED</td>
<td>28</td>
<td>29</td>
<td>52</td>
</tr>
<tr>
<td>PERCENT RESOLVED</td>
<td>38.9%</td>
<td>24.6%</td>
<td>24.3%</td>
</tr>
<tr>
<td>P COMPARSED TO WATCHFUL WAITING</td>
<td>0.01</td>
<td>0.95</td>
<td>-</td>
</tr>
<tr>
<td>P COMPARSED TO STEROID SPRAY</td>
<td>0.03</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 1 – Totals of each study arm including p-values