Conclusions

Our data show that surgical management of Chronic Otitis Media with Effusion (COME) in Down Syndrome (DS) patients with tympanostomy tube placement improves the hearing results. In our sample, chronic otorrhea after surgery seems to lead to multiple tube placements. Due to small sample size, further studies with a larger number of cases would be necessary to confirm these results.

Introduction

DS is the most common chromosomal abnormality among live births (1,18 /1000 births) The higher prevalence of COME in the DS population is attributed to a combination of factors:
• decreased lymphocyte function
• craniofacial abnormalities (midface hypoplasia, decreased cartilage density of the Eustachian tube predisposing collapse)
• generalized hypotonia
COME management with tympanostomy tube (TT) placement in DS patients has been debated in the literature due to:
• frequent need for multiple TT placement
• increased complication rates
• maintenance of hearing loss
COME may persist into late childhood and even into adulthood, with potentially profound impacts on long term hearing outcomes

Objectives

To analyze the outcomes of tympanostomy tube placement in children with Down syndrome (DS).

Methods

• Retrospective study
• Portuguese otolaryngology department
• From 2008-2016
• 44 children with DS followed on Otolaryngology consultation
• Univariate analysis using Fisher’s test (IBM SPSS statistics 24), significance level p<0,05.

Results

Follow-up time (mean): 4,9 years
Actual age (mean): was 10,5 years (range: 3-17years)

<table>
<thead>
<tr>
<th>Children with TT surgery</th>
<th>1 TT surgery</th>
<th>2 or more TT surgeries</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children with chronic otorrhea</td>
<td>0</td>
<td>4</td>
<td>0.009</td>
</tr>
<tr>
<td>Children with hypotiroidism</td>
<td>5</td>
<td>2</td>
<td>0.01</td>
</tr>
<tr>
<td>Mean age at first surgery</td>
<td>8,25</td>
<td>8,81</td>
<td>0.38</td>
</tr>
<tr>
<td>Children with cardiopathy</td>
<td>4</td>
<td>2</td>
<td>0.18</td>
</tr>
<tr>
<td>Children with sleep apnea</td>
<td>1</td>
<td>2</td>
<td>0.61</td>
</tr>
</tbody>
</table>

After tympanostomy tube placement, there was a significant improvement in overall hearing function (p=0,003).

Discussion

Multiple procedures were needed in some DS children, but overall improvements in hearing were noticeable. DS children’s hearing should be frequently accessed, but aggressive treatment for COME is still debated.