Factors affecting myringoplasty success
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ABSTRACT

Objectives
To determine the independent factors which significantly affect success in myringoplasty.

Methods
Retrospective study of all patients who underwent myringoplasty over a five year period.
Chi-squared analysis used to determine the significance of various factors.
Outcome measures were an intact tympanic membrane and closure of the air-bone gap to within 20dBHL.

Results
394 procedures included: 309 adults, 85 paediatric.
Mean overall age 35.8 (10-72); Mean length of follow-up 7.5 months (2-48).
Graft take rate 81% adult, 85% paediatric.
Cortical mastoidectomy and perforation site were significant for perforation closure in the adult group (p<0.05).
Perforation site was significant in closing the air-bone gap to within 20dBHL.

Discussion
It is important for the operating surgeon to appreciate the factors which significantly influence myringoplasty success.

OBJECTIVES
To determine the independent factors which significantly affect success in myringoplasty in a paediatric (≤16) and an adult age group.

RESULTS

<table>
<thead>
<tr>
<th>Perforation Site</th>
<th>No. performed</th>
<th>Successful closure (%)</th>
<th>Closure of ABG &lt;20dBHL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posterior</td>
<td>62</td>
<td>90</td>
<td>63</td>
</tr>
<tr>
<td>Anterior</td>
<td>102</td>
<td>81</td>
<td>67</td>
</tr>
<tr>
<td>Inferior</td>
<td>65</td>
<td>69</td>
<td>54</td>
</tr>
<tr>
<td>Subtotal</td>
<td>80</td>
<td>59</td>
<td>55</td>
</tr>
</tbody>
</table>

Cortical mastoidectomy (p<0.05) and perforation site (p<0.05) were significant for perforation closure in the adult group. Perforation site was significant in closing the air-bone gap to within 20dBHL. These were not significant in the paediatric age group.

DISCUSSION

Improved rates of success in myringoplasty due to simultaneous cortical mastoidectomy has been previously demonstrated, as has hearing gain in relation to perforation site. However, the relationship between perforation site and successful tympanic membrane closure has not been shown.

It is important for the operating surgeon to appreciate the factors which influence success in myringoplasty when deciding to operate and when consenting patients preoperatively.