The choice of ossicular prosthesis depends on middle ear condition, including ossicle autograft, polycel and titanium materials. We applied titanium ossicular prosthesis since 2008. The objective of this study is to evaluate the hearing results of ossiculoplasty using titanium prosthesis (PORP).

We divided patients into two groups, the traumatic ossicular disruption and chronic ear groups (Table 1). Among 68 patients (76 ears), the number of postoperative air-bone gap below 20dB is 58, accounts for 76% (Fig 1). On traumatic group, the number of post-operative air-bone gap below 20dB is 8 in 9 patients, accounts for 88% (Fig 2). On chronic ear group, 49 in 67 patients accounts for 73% (Fig 3). Furthermore, the overall extrusion rate is 4%, 3 in 76 patients. The most frequently used functional length of titanium PORP is 2.0mm, accounts for 90% (Fig 4).

Table 1. Mean preoperative and postoperative air-bone gap in decibel. (ΔABG: difference between pre-and post-operative air-bone gap.)

<table>
<thead>
<tr>
<th>Group</th>
<th>pre ABG</th>
<th>post ABG</th>
<th>ΔABG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traumatic Ear (9 ears)</td>
<td>45dB</td>
<td>16dB</td>
<td>29dB</td>
</tr>
<tr>
<td>Chronic Ear (67 ears)</td>
<td>36dB</td>
<td>19dB</td>
<td>17dB</td>
</tr>
<tr>
<td>Overall (76 ears)</td>
<td>37dB</td>
<td>19dB</td>
<td>18dB</td>
</tr>
</tbody>
</table>

RESULTS

We divided patients into two groups, the traumatic ossicular disruption and chronic ear groups (Table 1). Among 68 patients (76 ears), the number of postoperative air-bone gap below 20dB is 58, accounts for 76% (Fig 1). On traumatic group, the number of post-operative air-bone gap below 20dB is 8 in 9 patients, accounts for 88% (Fig 2). On chronic ear group, 49 in 67 patients accounts for 73% (Fig 3). Furthermore, the overall extrusion rate is 4%, 3 in 76 patients. The most frequently used functional length of titanium PORP is 2.0mm, accounts for 90% (Fig 4).

CONCLUSIONS

We share our preliminary hearing results of titanium ossiculoplasty in recent 3 years in Taiwanese people. The overall results are excellent. The number of postoperative air-bone gap below 20dB accounts for about 75% patients, especially in traumatic cases, up to 88%. The extrusion rate is rather low as 4%. The successful rate of traumatic ear group is rather high, accounts for 88%. The successful and extrusion rate of chronic ear group are 73% and 4.5%.

REFERENCE