

## CONDUCTIVE LOSS OF HEARING

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The present study is focused on the conductive loss of hearing observed for the period August 1965 to July 1968 at the A.I.I.S.H., Mysore. The different aetiological factors are discussed.

### Material and Method

From August 1965 to July 1968 a total of 1600 cases were examined in the Institute and out of this number, 761 were found to have loss of hearing only and the remaining 839 cases were of defective speech and hearing.

Every case attending the clinic was given a routine otorhinolaryngological examination. When direct laryngoscopy was indicated it was done. Audiological examination was done using standard procedures for the adults, play audiometry techniques having been used with children. For those children for whom neither of these procedures could be used either because they were too young or because of other associated problems, free field screening was done. The tests were conducted in sound treated rooms using the Beltone 15CX, Amplivox 83, BEL and the Arphi audiometers calibrated to the ISO standard.

The types of loss of hearing observed were as follows:

1. Sensorineural loss of hearing 303
2. Conductive loss of hearing 379
3. Mixed loss of hearing 79

Total 761

This paper deals with the 379 cases with conductive loss of hearing. An attempt has been made to fix the aetiological factors in each case. This was done by (a) direct examination of the case, (b) response to treatment (c) analysis of records associating age of onset of the problem and recovery of disease.

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## Results and Discussions

In this group of cases with conductive loss of hearing, the unilateral cases were 119, bilateral 260 forming a total of 379

TABLE I Shows the etiological factors considered primary in the cases under study..

Sl. No.	Cause	Unilateral	Bilateral	Total
1.	Impacted wax	8	26	34
2.	Adenoids	—	26	26
3.	Secretory Otitis Media	14	9	23
4.	Eust. Obstruction	4	7	11
5.	Nasal Obstruction (D.N.S.)	—	6	6
6.	Ac. Supp. Otitis Media	13	26	39
7.	Ch. Supp. Otitis Media	40	64	104
8.	Otosclerosis	37	93	130
9.	Adhesive Otitis Media	1	3	4
10.	Ossicular Dislocation	1	—	1
		119	260	379

The unilateral cases are only 119; and the bilateral are 260, in a ratio of 1:2. Any conclusion regarding the preponderance of bilateral loss over unilateral loss is not warranted. The reason for this may be that as patients are more handicapped by bilateral lesion they may seek medical and specialists' help for their problems. Further analysis may be more conclusive.

*Sex:* More males—233 cases—than females—146 cases—reported to us with conductive loss. The ratio is 2:1.

*Etiology:* Our series clearly indicates that the most common etiological problems in conductive loss are Otosclerosis, Ch, Supp. Otitis Media and Ac. Supp. Otitis Media.

It is gratifying to note that Ch. Supp. Otitis Media (104) and Ac. Supp. Otitis Media (39) which were found to be very prevalent, are problems not only preventable but also amenable to medical and surgical treatment. As for the other causes such as Adenoids, Secretory Otitis Media, DNS we have observed that if early diagnosis is made they can be completely cured.

*Otosclerosis:* 130 cases of Otosclerosis are seen, out of which 73 were males and 57 were females. Among them, 37 were unilateral and 93 bilateral. This is one of the major types of loss of hearing. The bilateral cases are more in number than the unilateral. Probably the unilateral cases may develop loss of hearing in other ear after some time. Follow up study of such cases would be very interesting. It is observed that the prevalence rate in males is more than it is among females, as contrary to the internationally accepted view. It is probably due to the fact that more men come for treatment than women.

There could be several other factors responsible for this higher prevalence among men than women observed in clinics in India. One of them could be that the hearing loss if identified in women may be a social stigma. Secondly, the earning of livelihood is predominantly a problem for the male than the female. For these reasons many women who may have Otosclerosis may not report to clinics.

In our series, a majority of otosclerosis cases were found in the age of group of 20—30 years which corroborates with the other studies so far reported.

Conductive loss of hearing under different age groups and sex as observed in our series is shown below:

<i>Age Group (Years)</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
<b>Below 5</b>	<b>46</b>	<b>31</b>	<b>77</b>
<b>5-10</b>	<b>41</b>	<b>27</b>	<b>68</b>
<b>10-15</b>	<b>23</b>	<b>19</b>	<b>42</b>
<b>15-20</b>	<b>33</b>	<b>15</b>	<b>48</b>
<b>20-25</b>	<b>20</b>	<b>17</b>	<b>37</b>
<b>25-30</b>	<b>18</b>	<b>5</b>	<b>23</b>
<b>30-35</b>	<b>12</b>	<b>4</b>	<b>16</b>
<b>35-40</b>	<b>13</b>	<b>8</b>	<b>21</b>
<b>40-45</b>	<b>11</b>	<b>6</b>	<b>17</b>
<b>45 and above</b>	<b>16</b>	<b>14</b>	<b>30</b>
<b>Grand Total</b>	<b>233</b>	<b>146</b>	<b>379</b>

As far as the age group the problem is more in younger age group that is between the ages 1 and 15. Nearly half the population examined here fall under 15. This indicates the great need for early case finding and treatment. Our clinical observation clearly shows that as age advances the prevalence of conductive loss of hearing diminishes but once again it increases at the age group of 45 and above. However, otosclerosis was most observed in the age groups of 20-30 years.

*Treatment:* In our series surgical treatment was suggested to 207 cases, **and** the remaining 175 cases were advised conservative treatment as suited to the case, including use of hearing aid.

Some of the cases were in the age group of 45 years and above. In this age group the cases did not volunteer for surgical treatment and preferred conservative treatment or hearing aid only. The details of conservative and surgical treatment for various conditions is shown in the following table:

<i>Sl. No.</i>	<i>Causes</i>	<i>Treatment</i>	
		<i>Conservative</i>	<i>Surgical</i>
1.	Cong. Atresia of Ext. Aud. Meatus		1
2.	Impacted Wax	34	—
3.	Adenoids	—	26
4.	Secretory Otitis Media	23	—
5.	Eust. Obstruction	11	—
6.	Nasal Obstruction (D.N.S.)	—	6
7.	Ac. Supp. Otitis Media	35	4
8.	Ch. Supp. Otitis Media	35	72
9.	Otosclerosis	37	93
10.	Adhesive Otitis Media	—	4
11.	Ossicular dislocation	—	1
<b>Total</b>		<b>175</b>	<b>207</b>

### Conclusion

In our study the Conductive Loss is more prevalent. It is more in the younger age group and more with bilateral involvement. The major problems are Otosclerosis, Ch. Supp. Otitis Media, Ac. Supp. Otitis Media.

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