HEARING LOSS CASES: SEEN IN SPEECH AND HEARING CAMPS

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It has been estimated that 5 per cent of our population are suffering from speech and hearing problems (Palmer M. F. 1963). Several other studies have also been reported on the prevalence of hearing loss. (Kapur Y. P. 1967-16.30 per cent, Gupta O. P. 1965-35.40 per cent, Bhatia and Mishra 1961—28 per cent and 30 per cent, Jain S. N. 1967—37 per cent, Kameswaran S. 1967—17 per cent, Nikam S. 1971—3.90 per cent of school going children, Viswanath N. S. *et al.*, 1971—22.80 per cent of rural school going children.) Considering the high incidence cited above, the prevalence of 5 per cent as reported by Palmer M. F. (1963) is an under estimation.

Some of the problems such as hearing loss, delayed speech should be diagnosed at an early age and necessary steps should be taken. Early diagnosis may facilitate the nature of prognosis. Parents are the first to identify the hearing loss. Hence parents should be educated. Conducting speech and hearing screening camps and exhibitions help to educate the parents and public, about the speech and hearing problems.

The present study focuses itself upon the different ENT abnormalities that were found among the cases that were seen, in the surrounding rural areas of southern Mysore state.

The S.R.S. Research Project (V.R.A-IND—38-68) at the All India Institute of Speech and Hearing, Mysore has hither to conducted seven (7) speech and hearing screening camps and eight*(8) exhibitions to educate the public, in different areas of Mysore state.

With the help of the Rotarians and local doctors, the screening camps and exhibitions were arranged. Pre-camp publicity was done by the local agencies through newspapers, distribution of pamphlets and projection of slides in theatres.

In response to the pre-camp publicity, cases with speech and hearing problems voluntarily reported for examination and advice. Therefore the data in the study is restricted to self-referred cases and may not hold true to the general population. There may have many people who had problem but who did not report for any reason.

As the case-load in the camps was high and the time at our disposal was short, we did not test everybody for all problems as is routinely done at our Institute. Hence we adopted the categorisation of the cases, i.e., the cases were chan-

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nellised to speech or hearing departments depending upon the nature of the problem. For example, stutterers who were able to respond to normal conversation were not directed for hearing evaluation. They were directly sent to Psychological and speech evaluation.

The reported cases were registered and examined after a case history was taken. Later the ENT examination was done by an Otolaryngologist. After this the patients were directed for speech and hearing evaluation.

Test environment

The ambient noise level in the audiometric rooms were measured. The range was 35-65 dB SPL on the 'C' scale (S.P.L. meter type 2203). Such rooms were selected for audiometry where the noise level was less.

Equipment

The screening was done using portable audiometers (Beltone 12-D and Madson O.B. 60-I.S.O. 1964). Audiometers were checked periodically for proper functioning, and were calibrated both electro-acoustically and biologically (B & K equipment).

The frequences tested were 1000 Hz, 2000 Hz, 4000 Hz and 500 Hz. The presentation level at frequencies 1000 Hz, 2000 Hz, and 4000 Hz were 20 dB and 30 dB for 500 Hz. These levels w ere validated at the All India Institute of Speech and Hearing, Mysore, on 50 children with normal ENT and hearing findings. (Nikam S. 1970) The frequencies were presented in the order given above to each patient.

Children in the age group of 3-6 years were conditioned to put coloured chips or marble into a tin box every time the tone was heard. For older group standard audiometric procedure was used.

The test was considered positive (i.e., the examinee has failed), if there was no response at the given level in two or more frequencies in the same ear or in the same frequency in both the ears. However if the test was positive only for 2000 Hz and 4000 Hz in one ear, the other ear being negative, the test was extended to 6000 Hz and 8000 Hz (presentation level as in 2000 Hz and 4000 Hz) as this facilitated detecting early Sensory-neural loss cases. The cases failing the screening were referred to the All India Institute of Speech and Hearing, Mysore, for a thorough check-up.

Results

Out of 2571 cases screened for various speech and hearing problems, 1470 cases had hearing loss, covering the age range of 1-90 years.

Table 1 shows the number of males and females examined at different camps with the complaint of hearing loss.

Table 2 gives the age distribution of the cases with the complaint of hearing loss.

Table 3 shows the ENT findings of these cases examined.

The results related to other speech problems are not discussed in this paper.

From the table 3, it was observed that C.S.O.M. is the most frequently observed problem. It was found that nearly 60 per cent of hearing loss cases showed these ENT abnormalities.

TABLE 1. Shows the number of males and females examined at different camps with the complaint of hearing loss

SI. No.	Place	*Males*	*Females*	*Total*
1.	Davanagere	148	52	200
2.	Kollegal	42	6	48
3.	Chickaballapur	133	51	184
4.	Mercara	60	23	83
5.	Gauribidanur	162	8P	242
6.	Virajpet	202	116	318
7.	Hunsur	284	111	395
	Total	1031	439	1470

TABLE 2. Showing the age distribution of the cases with hearing loss

Age Group Years	Davana-gere		Kollegal		Chicka-ballapur		Mercara		Gauri-bidanur		Vir ajpet		Hunsur		Total in each age group
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1-10	33	15	7	5	44	21	13	7	57	40	61	36	103	53	495
11-20	55	20	18	1	24	9	18	8	47	15	77	40	58	25	415
21-30	19	6	12	...	22	6	14	5	23	6	25	10	39	13	202
31-40	12	6	...	...	16	12	8	1	6	7	6	14	34	5	127
41-50	15	5	2		9	...	4	...	9	7	9	5	25	7	97
51-60	4		1	...	9	1	1	1	7	2	17	3	15	5	66
61-70	6		2	...	4	2	2	...	7		6	7	9	1	46
71-80	2	...	...	...	5	...	..	1	4	3	1	1	...		17
81-90	2								2	...	...	...	1		S
Total	148	52	42	6	133	51	60	23	162	80	202	116	284	111	1470

TABLE 3. Showing the E.N.T. findings of the cases with the complaint of hearing loss

E.N.T. Findings	*Both ears*	*One ear*
1. Impacted wax	153	**149**
2. CSOM	241	**240**
3. Dry perforation	43	47
4. Retracted drum	24	40
5. Thickened drum	20	46
6. Old scar	4	15
7. External otitis	4	3
8. Post Auricular scar		2
9. Aural polyp		9
10. Cholesteatoma		1
11. Congenital Abnormalities.		
1. Atresia of the EAM		2
2. Microtia		3
3. Malformation of pinna		1
12. Mastoid Absess		1
13. Allergic Rhinitis	22	
14. Atropic Rhinitis	3	
15. Enlarged T & A	64	
16. **DNS**	87	
17. Sinusitis	4	
18. Nasal polyp	2	

Most important in any hearing survey is the follow-up. If this is not done properly, the survey loses much of its value. Out of 500 cases referred to the All India Institute of Speech and Hearing, Mysore for further investigations and treatment, only 75 cases have reported so far. Follow-up cards have been sent to those who have not reported yet. Also possible steps are being taken to give relief to the hearing loss or improve their hearing by means of medical or surgical treatment at K.R. Hospital and by means of hearing aid at the All India Institute of Speech and Hearing, Mysore. About 100 patients have been recommended for the issue of 'free' hearing aids.

Conclusion

In our study a majority of the cases had C.S.O.M., particularly in poorer classes of the society. The following conclusions are very pertinent to this project:

1. Such screening camps are very helpful in educating the rural population to seek medical advice.

2. All cases seeking medical aid particularly children, for diseases like respiratory cattarh, common cold etc., it is advisable to rule out middle ear pathology, the condition becoming chronic, which leads to hearing loss.

3. There is a great need for the establishment of E.N.T. departments and Speech and Hearing centers in each district hospital, for the benefit of rural and urban population, and for early diagnosis and prevention of hearing loss.

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