

AN UNUSUAL CASE OF DEAFNESS

BY

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Introduction

This account is the description of an individual, who complained of deafness persisting in one ear after a trivial injury. The clinical diagnosis proved difficult. Nearly nine to ten months after the onset of the deafness, the individual was bitten by a snake and he was given anti-venin. This was followed by a severe reaction. Very soon after the reaction, he noticed that his hearing was restored, to near normal. The case is presented mainly because of its unusual nature.

Details of the Case

The individual is a male aged about 25 years. He was examined on the 26th of May 1960, at the time of initial entry at A. F. Central Medical Establishment, by an E. N. T. specialist and the condition of the ears, nose and throat was found to be normal. His hearing was normal as tested by pure tone audiometry and by voice tests (See tables I and II). One month after the examination (22-6-1960), he sustained a trivial injury to his right ear, whilst performing a somersault. He did not have pain at that time. Next day he complained of pain and hearing defect in the right ear. He was treated with ear drops. Pain persisted for 2 or 3 days and subsided, but the hearing defect persisted. There was no fever, giddiness or tinnitus.

Six days after the incident, "old blood streaks on the Rt. T. M." and "old blood marks on the Lt. T. M." were noted by the doctor treating the case. He was under the observation of an E. N. T. specialist from 28-6-1960 to 12-8-1960. He was not given any antibiotics. The hearing defect in the right ear persisted.

On the 4th of April, 1961 (nearly nine to ten months after the onset of the disability) was bitten by a snake and was given anti-venin. As soon as the injection was given, he fainted. He had severe serum reaction. Very soon after that he found that he could hear normally in his Right ear. Since then, he claimed that his hearing had remained normal. This was confirmed by an audiometry examination carried out on 25-7-1961.

Apart from the hearing defect (mixed deafness) there was no other clinical abnormality in his ears, nose and throat. No systemic abnormalities or psychoneurotic manifestations were noted at any time in this case. Psychiatric examination revealed no abnormality.

His pure tone audiometry done on various occasions are given below in a tabular form in Tables I, II and III. For convenience of comparison the audiometry results are tabulated for each ear separately.

TABLE I

Air conduction Audiometry Rt. ear (Hearing Losses in Decibels)

Frequency	26-5-60	30-6-60	26-9-60	7-10-60	17-3-61	18-3-61	20-3-61	25-7-61
125	10	55	65	60	Not heard	65	70	5
250	5	55	60	55	60	60	60	0
500	5	60	60	60	60	50	55	0
1,000	5	65	65	70	70	55	60	0
1,500	0	60	80	70	65	60	70	0
2,000	0	70	65	55	65	65	65	-10
3,000	5	60	70	55	60	60	70	-10
4,000	5	60	80	60	60	70	75	-10
6,000	15	70	80	65	60	70	75	-5
8,000	-10	65	80	65	75	65	75	-5
12,000	-5	70	70	60	65	70	65	-10

Injury to the Rt. ear
22-6-60

Snake bite and serum
reaction following
antivenin 4-4-1961.

TABLE II

Air conduction Audiometry Lt. Ear (Hearing Losses in Decibels)

Frequency	26-5-60	30-6-60	26-9-60	7-10-60	17-3-61	18-3-61	20-3-61	25-7-61
125	5	45	35	25	15	0	5	0
250	-10	40	30	25	5	0	5	-5
500	0	30	15	15	5	0	0	-10
1,000	0	25	20	25	5	0	0	0
1,500	-10	20	10	10	0	-5	-10	-5
2,000	0	25	10	15	0	-5	-5	0
3,000	5	20	5	0	-5	-5	-10	-10
4,000	5	25	0	20	0	-5	-5	-5
6,000	-5	45	15	25	5	0	0	-5
8,000	-10	35	10	5	0	0	-5	-10
12,000	-5	35	5	0	-10	-10	-10	-10

Injury to the Lt. ear
22-6-60

Snake bite and serum
reaction following
antivenin 4-4-1961

TABLE III

Audiometry Rt. Ear with and without masking : Date 18-3-1961

Frequency cps.	Right Ear			Left Ear
	with no masking	with 40 db masking on the Lt. ear.	with 60 db masking on the Lt. ear.	
125	65	Not heard	Not heard	0
250	60	65	70	0
500	50	70	75	0
1,000	55	70	75	0
1,500	60	75	80	-5
2,000	65	75	75	0
3,000	60	75	75	-5
4,000	70	75	80	-5
6,000	70	Not heard	Not heard	0
8,000	65	80	Not heard	0
12,000	70	Not heard	Not heard	-10

Observations on the audiometric findings

- a) After the injury both ears showed hearing loss, the right ear being worse than the left.
- b) Left ear showed progressive improvement and a normal reading was recorded on 18-3-61.
- c) The right ear showed hearing loss almost at a constant level of 60-70 db.
- d) The threshold of hearing in the right ear was elevated slightly when the left ear was masked with a 40 db. white noise. An increase in masking level to 60 db. did not bring about any further elevation of the threshold.
- e) Audiometry on 25-7-1961 (after the snake bite) is normal.

Discussion

In this case the following pertinent questions arise :

- 1) Could the deafness have been caused by the injury?
- 2) Did the snake bite or anti-venin play any part in restoration of the hearing?
- 3) Is this deafness organic or functional? If it is functional, can a hysterical personality fix his hearing threshold at a partial deafness level of 60-70 db. in one ear, over a lengthy period of nine to ten months?

Comments on the points raised in this case are invited from Medical Officers.

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