# APHASIA—A CASE REPORT

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Mr X, 47 years, reported to the clinic on 15-12-69 with a complaint of 'no speech'. His pretraumatic history was given by his wife. He is a high school graduate, and a forester by vocation. The major interests of his life were hunting and shooting and he was a shikari for many years.

He had gone to bed one evening (Mar 1966) in apparently good health, awoke the next morning unable to move his right side or to speak. He was immediately admitted to a hospital in his home town, where he improved at first, but after two weeks developed small pox and had to be discharged from the hospital. This illness lasted for three months, during which time, he was in an unconscious state for two months. Being diabetic he developed other complications and was confined to bed for several months. Throughout this period he was nursed by his wife, and her attitude was one of constant encouragement. In spite of this Mr X developed attitudes of despair and depression and became withdrawn. This condition prevailed until the wife stimulated Mr X to seek help from All India Institute of Speech and Hearing, Mysore.

He was first seen at this Institute in December 1969—four years after the onset of the problem. The aphasia was predominantly expressive, but in most severe stages there were limitations in receptive functions as well, and severe disturbances in writing and non-language performances which required most constructive mental activity were also noted. He had paralysis of the extremities of the right side of the body and an upper motor neuron type of facial palsy on the right side. His co-ordination seemed impaired and gait was not normal. The cause of the hemiplegia was a thromboses of the left middle cerebral artery, the lesion being largely motor. According to the psychological report, his attentive abilities were good, but perceptual and memory abilities were seen impaired. His performance on pass along tests was fair but on the Block Design test his performance was poor, and he could not go beyond the third design. Performances on language intelligence tests were below those which would have been expected before the attack, but those which involved the most constructive, creative mental activity were the most seriously affected. Performances on non-language tests dependent upon constructive mental activity were also affected.

Hearing evaluation revealed hearing to be within normal limits.

The first language area investigated was the ability to understand spoken language. This was tested by asking him to perform certain expected tasks.

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Judgements were made by repeated observations of simple behaviour in response to directed questions. He understood a good deal of what was said to him but seemed incapable of verbal responses. He responded by pointing and by gestures which were easily understood by the examiner. He could select the correct one of four pictures to illustrate sentences read aloud to him. He was also able to follow directions requiring good spatial orientations..'

To elicit language expression in its simplest form, Mr X was asked to name certain objects. He made no vocal attempts other than an occasional strained 'ah'. This sound, whenever it occurred, was substituted for verbal communication. Frustration and withdrawal behaviour were noted when his attempts at verbal expressions failed.

Having determined the spoken language abilities, abilities to read written or printed language was tested. Since oral language was difficult because of expressive aphasia, words were shown and then he was asked to point to the named article in the room. It was observed that there was an inability to read orally and an inability to write in response to spoken or written stimuli. Writing was impossible as he was unable to hold a pencil either with the right or left hand. After the attack Mr X had not tried to write until the time of the examination. As his attempts to communicate failed, he exhibited more and more often and for less and less cause, irritability and catastrophic reaction to simple frustration. Arithmetical performances were effected commensurately with the other language responses.

Non-language tests could not be given because of right sided paralysis. Non-language deviations included reduced general level of intelligence, poor organizing ability, catastrophic reaction, reduced initiative and reduced capacity for abstract behaviour.

Following testing period, he was given formal training in language. Malayalam was used as the medium of instruction as this was his mother tongue. A programme was developed which dealt with every facet of the individual and his personality. Recovery was directed in terms of immediate goals. Multisensory approach was planned rather than isolated direct appeal to one medium. Therapy was planned five days a week, 30 minutes daily, on an individual basis. The additional activity included physiotherapy designed to alleviate his paralysis.

Since Mr X could comprehend spoken language, training in the production of speech sounds was attempted first. He needed stimulation at a lower level than the production of whole words. As he was quite incapable of making any purposeful sounds, the task of training was very difficult. To begin with, the production of vowels were attempted through direct imitation, using visual and auditory cues. He experienced considerable difficulty in initiating phonation and it took quite sometime to learn the production of vowels and to sustain them. When he learned to produce the vowels with ease, the next step was to teach the bilabial sounds as these were the simplest to teach through imitation. By a combination of the lip sounds and the front vowels the idea of vocal production was

obtained. '. It was not necessary to teach beyond the bilabial sounds as from these he could go through the rest of the sounds without separate training on each sound. The sbunds were combined immediately into short meaningful words. Although it took nearly a month to achieve a single naming word, it did not take more than two days to gain his second word and then he was able to recall his old vocabulary at a fairly rapid rate. Mr X's facial paralysis affected the articulatory musculature especially that 6f the tongue and lips. Direct training for rapidity of muscular movements was helpful. Upward, downward and sideward movements of the tongue were also tried and found helpful. He was inclined to drawl his words and showed reversals and final elisions of sounds. Recognition of errors was made use of by recordings of speech attempts, explanation and discussion of the problem until he could conceive of his problem. Other simple speech techniques were used with some success. However, training for articulation was minimized and dealt with only during the later stages of training. Main consideration was free and easy speech.

For vocabulary training, before approaching the current nouns, a training vocabulary in the area of greatest pretraumatic interest was sought. He remained on the naming level for a long time and was unable to increase his vocabulary of names or to add to any words on the verb level even after four months of training. Once the naming level was established to some degree, therapy was shifted to the verb level. When this was developed, work on the formulation of simple sentence was started. In the early stages, these simple sentences were composed of noun and verb only.

Writing exercises were begun soon after the first voluntary words were spoken. Writing difficulty was mainly due to the hemiplegia that accompanied the disorder, Writing practice with the left hand was approached as soon as possible in the training programme. It accompanied other therapy and was part of a total therapeutic programme. In writing the difficulty was more apparent; besides, the order of letters within the word was often confused. Reversals and substitutions of sounds that paralleled the spoken form were noted in writing. These errors were not self corrected in most sentences.

Reading was also added during a fairly early stage of training. Mr X was made to pick words out of the headlines of newspapers, copy them and read them aloud. In both reading and writing, large printed material was found useful. Spelling was also made a part of daily therapy.

A work book of selected material based upon his interest and comprehension level was developed for naming, reading, writing and spelling. In the early stages no attention was paid to accuracy, but stressed and encouraged all his efforts to express meaning levels from materials read. Retelling by words or writing was used. Many words that Mr X could not speak could be written. Spelling was difficult and at times made reading the written words extremely difficult.

Number work was taken up as the next goal of therapy. Work on this was started with simple additions and substractions. He learned to do simple additions, substractions and multiplications, but never got beyond that point, and soon lost all interest in number work.

Physiotherapy was a regular part of therapy and was given on five times a week basis, by a professional therapist. This seemed to stimulate him.. His hemiplegia reduced, walking became easy, gait improved and he became more independent. He was able to grasp and release objects and move his right hand with greater ease.

The non-language characteristics were taken into consideration while planning a therapy programme and it was possible to reduce most of these deviations by training.

In brief, the methods included drills in the production of speech sounds, letter forms in writing; practice in articulation through repeating and oral readings, various exercises designed to increase the number of words available for use in spontaneous expression, exercises in sentence construction, and work on the more complicated processes of understanding and expression through oral or written reporting of passage which Mr X had listened to as they were read to him or had read himself. The material was adopted to his interests and work was arranged so that he would be encouraged by previous success and stimulated to make new efforts.

His training had to be terminated after 10 months, as Mr X suddenly decided to leave for his home town to explore the possibilities of resuming his old job. During these ten months of training there were appreciable changes in the level of his performance and in their quality. His speaking improved but failures in articulation and fragmentary speech were still evident at the end of the period. Oral reading like speaking showed fair progress but it was characterized by omissions of parts of words. He practiced writing with his left hand but could never be induced to do much spontaneous writing. Nevertheless a definite improvement was evident. He became well oriented for time and learned to tell time from a clock.

Thus the training was of value directly for the improvement in speaking and other specific performances, and it was of tremendous value indirectly for its effect on Mr X's morale. His progress was quite satisfactory in view of his complete inability to speak, read or write at the time he entered training. The first follow up, made after 2 months of discharge indicated that he had resumed his old job and had maintained the improvement seen at the time of termination.