

Treatment of Aphasia with Coexisting Apraxia
A Round Table Discussion

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There has been a good deal of confusion among speech and language pathologists and other health care professionals as to the difference between apraxia of speech and aphasia. Part of this confusion is based in part on the fact that apraxia of speech has been called many things; from aphasia (motor aphasia, Broca's aphasia, paraphasia) to dysarthria (cortical dysarthria, anarthria, and aphasic anarthria). Members of this discussion group were in agreement that aphasia and apraxia of speech were best defined in terms of the definitions set forth by Darley (1979), p. 1.

"Aphasia

- a. General: impairment, as a result of brain damage, of the capacity for interpretation and formulation of language symbols; multi-modality loss or reduction in efficiency of the ability to decode and encode conventional meaningful linguistic elements (morphemes and larger syntactic units); disproportionate to impairment of other intellectual functions not attributable to dementia, sensory loss, or motor dysfunction; manifested in reduced availability of vocabulary, reduced efficiency in application of syntactic rules, reduced auditory retention span, and impaired efficiency in input and output channel selection.
- b. Oral expressive manifestations: slowed vocabulary retrieval, substitution of words, use of wrong words, circumlocution, omission of connectors or modifiers, telegraphic constructions, altered word order, reduced fluency, super-normal fluency, neologisms, jargon, perseveration."

"Apraxia of speech: an articulatory disorder resulting from impairment, as a result of brain damage, of the capacity to program the positioning of speech musculature and the sequencing of muscle movements for the volitional production of phonemes and sequences of them. The speech musculature does not show significant weakness, slowness, incoordination or altered tone when used for reflex and automatic acts. Prosodic alterations may be associated with the articulatory problem, perhaps in compensation for it."

The purpose of the following discussion was to consider treatment of aphasia with coexisting apraxia. The discussion gave consideration to the patient who has (a) severe aphasia and apraxia of speech, and (b) mild aphasia and severe apraxia of speech.

A. Severe Aphasia and Apraxia of Speech.

The consensus of the group was that patients with severe aphasia and apraxia of speech need therapy designed to meet individual needs. However, if significantly reduced, it would be necessary to direct therapy toward auditory comprehension abilities before initiating therapy for the motor speech deficit. It was suggested that the material used for therapy should include pictures and lists of words representing specific sounds in the initial word position. The responses accepted should be limited to individual sounds and short words or phrases which incorporate the target. Some members of the group felt that some patients needed direct work on the apraxia, as it gave the patient the feeling of accomplishment when they imitatively or spontaneously said something, even though they did not comprehend the meaning.

B. Mild Aphasia and Severe Apraxia of Speech.

In treating the patient with mild aphasia and severe apraxia of speech, melodic intonation therapy was used by many members of the group. Further, varying degrees of feedback and reinforcement were used to help the patient monitor his or her behavior. For example, for one patient, the VU meter on a tape recorder was used to show the onset of vocalization. In another case, a patient who smoked was allowed to inhale and exhale when he completed a selected task by the clinician. In some cases, sound cues were used to facilitate word production for patients with mild aphasia and severe apraxia of speech. Techniques included positioning the patients' articulators in front of a mirror so that he or she could see the postures for a particular sound. The mirror, which has often been recommended as a valuable aid in apraxia therapy, was considered inappropriate by some members of the group as it may "turn a patient off or confuse him or her." Some members reported using a "cloze" task whereby a patient was asked to complete short sentences, i.e., "you drive a _____."

Modification of stuttering therapy has been used with patients who have mild aphasia and apraxia of speech. When utilized, the patient visualizes where the articulators are before he or she imitates a word. Prolongation of initial sounds has been used to maintain the articulators in the correct position. The sensory feedback provided from this procedure has helped develop the correct articulatory pattern for target sound production.

AMERIND sign has been used as a supplement to oral output for patients with apraxia of speech. Electrical stimulation by means of a vibrator or small electrical shock has been helpful in initiating voice in some cases. For some patients who are unable to imitate phonation, coordination of phonation and the exhalation has been improved by placing pressure on the diaphragm while the patient sustains "ah" during exhalation.

The results of the round table discussion are best summarized by noting that there is no one prescribed approach to treatment of aphasia with coexisting apraxia of speech. However, through continued innovative, documented and critical study of our therapy, we may eventually be able to identify the most effective methods of treatment for these disorders.

References

- Darley, Frederic L., Mayo Clinic Course in Neurology: Bibliography and Lecture Notes for 1979. Rochester, Minnesota.
- Skelly, Madge, Schinsky, Lorraine, Smith, Randall W., and Fust, Rita. American Indian sign (AMERIND) as a Facilitator of Verbalization for the Oral Verbal Apraxic. JSHD, Vol. 39, November 1974, No. 4, pp. 445-456.