POST SURGICAL LANGUAGE DYSFUNCTION: A STUDY IN LONG TERM REHABILITATION

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The purpose of this report is to summarize the history of a patient affected by a severe communication disorder which appears to have arisen from progressive Parkinsonism and from the surgical treatment administered for that condition. The primary focus is placed on the response of the patient to a program of speech rehabilitation, as measured by the Porch Index of Communicative Ability (Porch, 1967) and other procedures. Our patient is one of a group of patients, commonly believed to have a poor prognosis for rehabilitation, however, they may demonstrate improvement following speech and language stimulation. Our working hypothesis with this patient was that a program of intensive stimulation through all language modalities would have a meaningful impact.

Case History

The subject of this report is a male veteran who was 48 years old at the time of the first speech and language evaluation. He was admitted to the Veterans Administration Hospital in Oteen in September, 1969. His medical history shows a long-standing Parkinsonism. In the VA Hospital in Durham, he underwent a right stereotactic thalamotomy in February, 1967. The surgery is reported to have reduced the tremor on his left side and improved his strength bilaterally. In August, 1969, he underwent a left stereotactic thalamotomy which essentially eliminated the tremors, however he was described as "slouched in a wheelchair and more or less out of contact with his surroundings." The patient was described by an examining physiatrist as speaking with marked dysarthria but able to express himself. However, the report also states "he responds to questions in an unintelligible mumbling."

A referral to the Audiology and Speech Pathology Service was made almost ten months after the patient was admitted to the VA Hospital in Oteen. A speech pathologist in September, 1970 described the patient's imitative speech as unintelligible. Reference was also made to the patient's inability to write. In December, 1970, the Porch Index of Communicative Ability (PICA) (Porch, 1967) was administered.

The overall score was at the 35th percentile, and the lowest modality score was verbal (19th percentile). The graphic modality score placed the patient at the 52nd percentile.

Goals and Methods of Treatment

Following clinical observation and formal testing, therapy was initiated. The patient's social withdrawal combined with drooling and severe dysarthria had prompted one observer to describe him as a "human vegetable." Speech rehabilitation was designed to modify inadequate behavior in all language modalities, since the PICA results had revealed severe communicative deficit in all modalities.

Methods of treatment placed fundamental emphasis upon what has been called the "integral stimulus" method of eliciting verbal response (Milisen, 1954). Demonstrations of articulatory movement sought to inhibit the perseverative repetition of unintelligible words by the use of longer words and short sentence units. A variety of activities designed to promote a coordination of eyes and hands was built around materials of an intellectually stimulating nature such as the New York Times large type weekly; the Wall Street Journal; various publications about automobiles and other subject matter of special interest to the patient. A structured program of expression through writing rounded out the rehabilitative program.

Results

After six weeks of treatment, the PICA was readministered. The patient's overall performance had improved from the 35th to the 39th percentile. Most progress was evident in graphic ability, where the patient moved from the 52nd to the 67th percentile.

The patient's improved written expression was utilized for functional communication. Although unable, except in rare instances, to articulate intelligible words, the patient was able to let others know his wishes and feelings in written form. Improvement was noted in spelling, willingness to correct himself, and syntactical completeness. Letter reversals, failure to use prepositions and conjunctions, and omission of predicates were less frequent. The patient showed increasing interest and responsiveness, greater speed and efficiency, more accuracy, and greater completeness.

Improvement in verbalization was minimal, however the patient attempted more spontaneous productions than on the previous test. Auditory input and imitative speech continued to show severe deficits.

Following four months of treatment, the patient was discussed in a hospital staff meeting. Nurses on the chronic care ward reported that the patient had begun to sit more erectly in his wheelchair, and he tried to raise his head and to look at the person with whom he was conversing. Drooling was reported to have been brought under control. Occupational and physical therapists also reported substantial gains by this patient in tuning in and attempting to communicate more. A psychologist reported his surprise at the patient's response to the Wechsler Adult Intelligence Scale (Wechsler, 1955). The patient, despite his severe communication deficit, achieved a score of 96, placing him within the range of average adult intelligence. This was only six points lower than his performance on a test administered prior to surgical intervention. The psychologist stressed that improvement had been achieved despite a considerable period of institutionalization following surgery.

One year later, a third PICA was administered. The patient obtained an overall score which placed him at the 41st percentile. His graphic responses had declined from the 67th to the 63rd percentile, however. The increase in overall percentile ranking was a function of improved gestural responses which brought him from the 40th to the 57th percentile in that modality.

Discussion

The progress made by this patient in response to a period of intensive speech rehabilitation is not enough to make him a candidate for independent living or even to qualify him for placement outside a chronic care unit in a general hospital setting. However, his improvement in communication and in other areas of functioning is significant. The nursing staff and other personnel who deal with this patient have noted his increased and continuing interest in the rehabilitation program.

Our patient, severely handicapped and demonstrating a poor prognosis, behaved contrary to previous reports. After reviewing the case histories of 300 patients with Parkinson's disease, Sarno stated, "the speech of these patients does not permanently improve" (Sarno, 1968, p. 269). However, she feels speech therapy is beneficial to the patient from a psychological standpoint. Cooper (1968) suggests that verbal communication is extremely important for patients affected by Parkinson's disease. He states, "both group and individual therapeutic sessions are useful" (Cooper, 1968, p. 1260). Further, Cooper stresses the patient's need for social contact in everyday situations. This emphasis supports Hansen's observation,

> Perhaps the implication here is that rehabilitationists will have to wear two hats: one providing some individuals with traditional vocational rehabilitation services, and a second rehabilitating others to their fullest non-work potential. (Hanson, 1968, p. 13)

Our patient is so handicapped that it is unlikely he will ever enjoy anything approaching adequate verbal skills. His writing skills have improved, but his written communication is limited and he has difficulty monitoring his responses in this modality.

Improved responsiveness in our patient is illustrated by his increased interest in attending recreational therapy activities. In fact, he now takes the initiative to visit the recreation center. Reports in his case history regarding a pattern of social withdrawal have been negated by his present behavior.

This paper has discussed the progress made, in a variety of communicative skills, by a patient with severe chronic illness. Although his history may be atypical, it is likely that he represents a growing number of individuals in extended care facilities who can make meaningful advances in interpersonal relationships as well as in specific communication skills despite a generally poor prognosis. Speech pathologists may wish to consider the needs of such individuals when they select treatment candidates.

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