who had now become the final year class, were faced with the dilemma of, choosing whether or not to skip rehearsal time, in order to swot for their MBBS part III exams (in Obstetrics, Gynecology and Paediatrics). I'm proud to say that a sense of commitment to the higher calling of service prevailed, and our class was well represented. Members of the 1993 and '95 set of students also joined the Choir, so that for the first time, the Alaanu Choir had well over 50 members.

Mr. Ogundele was on hand again, and despite the fact that he was now a married man with responsibilities, he still lent us his helping hand.

The Chairman of the occasion was Prof. B.O. Osetimehin, and Chairlady - Dr.Mrs Kalejaiye. Mr. Ferdinand Osuagu was master of ceremonies, and the Choir was again led by Dr. Tosin Smith.

At this point, I would like to record with gratitude the yearly contributions of Dr. Mrs. Smith, Director, Molly Hospitals, who annually donates the balloons used in decorating the hall. I say a big thank you on behalf of all Brownites.

The medical Students have in the past also organized car washes in the middle of the year, which also raises money for the Social Services Office. Their efforts are entirely voluntary.

I will always remember Christmas spent preparing for the Concerts with joy and gratitude that I was given a chance to serve my fellow men, to become part of a higher purpose. I am sure I speak for all Alexander Brown Hall Students, who always take part in various ways to make the show a success as I write this.

I recall the Arabian proverb - "It is better to light a candle in the wind, than to curse the darkness." The Medical Students believe in lighting candles. Monies raised from the concerts and car washes are used to help the poor and needy patients of U.C.H. And that, I guess, is what Christmas is all about!

Yemisi Sonbore (Miss.)
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LANGUAGE DISORDERS IN STROKE PATIENTS

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INTRODUCTION

Among the many "calamities" befalling a patient with cerebrovascular accident popularly known as a stroke, there is none as devastating as the loss of the ability to communicate, secondary to brain damage. Initially following a stroke, confusion prevails. The normal activity of the brain is disrupted and communication difficulties are a common result. In addition to hindering some of the modalities of treatment required for other manifestations of stroke, the inability to express him-or herself, or to comprehend instructions and explanations can be an extremely frightening and frustrating experience for the patient. This period of confusion causes anxiety, and all problems are quickly out of proportion. The fear that a loved one's mental capacity has been severely altered can be equally devastating to family and friends. At this initial stage, rest, quiet surroundings and sympathetic people are essential ingredients. A routine of regular deep and rest periods during the day can do much to lessen the effects, and help patient to cope. Noise can be a cause of distress, and the brain may over-react to a lot of stimuli like a loud radio, television or a record player. What annoyed the patient before stroke can now prove intensely irritating. People talking rapidly, too loudly and more than one at a time can increase this confusion. The family can help by protecting the patient from excess, stress and strain.

One of the primary goals in caring for the patient with language problems is, to help him establish a means of communication, and this usually forms the basis for speech therapy

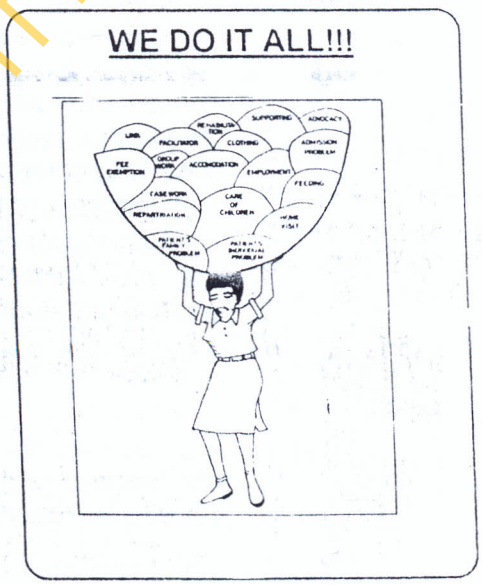
Language is a system by which man makes use of words as symbols to communicate his thoughts. This complex system includes rules for organization of these symbols in such a manner that their meaning and logic is expressed with precision. The basic components of any language are (1)a system of sounds; (2)a vocabulary (3) a grammar; and (4) a semantic system. Speech sounds, referred to as phonemes, are the smallest units of speech which serve to formulate words, and the combinations of words; are used to formulate sentences and convey ideas. This activity is the highest form of cerebral function, and it occurs only in man (Sarno 1975).

The development of language in a child begins with auditory recognition of words. The end point of language development is the formulation of ideas in both the spoken and written language; Language serves as the vehicle for acquisition of almost every form of knowledge (Agronomtz et al 1964, Sarno 1975).

Visual and hearing problems alter significantly the process of language development. Physical impairments of the structures that produce voice and facilitate articulation of the spoken word will influence the quality of speech patterns developed. Mastery of language range in degree from the ability to communicate one's most basic needs, to production of literary work as an art form.

There is an important distinction between disorders of language and disorders of speech. Speech disorders imply an impairment in verbal expression that results from a weakness or lack of coordination in the musculature used in articulating words (dysarthina). Patients with language disorders may be able to articulate words properly, but the words they produce are linguistically incorrect. When the patient has a language disorder that affects comprehension, he will be unable to grasp the meaning of spoken or written words, even though there may be no impairment of his hearing, or may be (Geschwind 1970).

The patient's premorbid level of intelligence and personality traits can have an important effect on his reaction to illness, acceptance of disability and motivation to overcome his handicaps. These factors must be considered in planning care for all patients. In spite of this, however, it cannot be emphasized too strongly that speech and language disorders resulting from stroke are primarily manifestations of diseased brain, and not necessarily reflections of the patient's basic personality, or level of premorbid intellectual functioning. Clinicians caring for patients with derangements of speech and understanding due to stroke must never lose sight of the fact that the patient's behaviour is the result of a physiological loss, over which he has no control. One must not be too hasty to label these patients as difficult, uncooperative, unable to learn or unmotivated. Socially unacceptable speech patterns are not indicative of a pathological condition that can be localized to damage in a specific area of the brain as are incontinence, paralysis and impairment of cardiovascular function.



Cerebral dominance (the greater importance of one side of the brain over the other for certain learned behaviour) is particularly important with regard to language function, since damage to the dominant hemisphere will result in a different deficit than damage to the non-dominant hemisphere. Cerebral

dominance is also related to handedness. The higher nervous pathways for speech are usually located in the left hemisphere of the brain in persons who are right-handed (approximately 93% of the population). Their left cerebral hemispheres are thus classified as dominant. Conversely, the speech pathways of left handed persons are ordinarily situated in the right hemisphere which is considered dominant. It is important to note that while 7% of the population is left handed, about 60% of these people have speech centres located in the left hemisphere, and only 40% have their speech centres located in the right hemisphere (Brain 1961).

Historical Background]

Paul Broca a French surgeon in 1861 observed that two patients with lesions in the posterior part of the left inferior frontal convolution had lost their power of speech. Wernicke, thirteen years later in Germany, expanded this concept and distinguished three forms of aphasia (Brain 1961).

1. *Sensory aphasia*

This results from a damage of the auditory centre in the temporal lobe and resulted an inability to understand words, and a lack of recognition of this speech defect on the part of the patient.

2. *Motor aphasia*

This is from a lession of the third frontal convolution and resulted in loss of images for articulated speech. When the lession was in the pathway between the auditory and the speech centre, conduction aphasia occurred. The patient will still show comprehension, would use words inappropriately, but know he had erred.

3. *Total aphasia*

This results from destruction to both centres, with loss of both the ability to comprehend and the expression of speech. However, research still continues on trying to establish correlations between various disorders of language and location of lesions in the brain, as well as to clarify the neural basis of speech itself.

Areas of the Brain Associated with Disturbances of Speech and Language Functions.

1. *Wernicke's Area*

This is located in the temporal lobe between Heschl's gyrus which is the primary receiver of auditory stimuli, and the angular gyrus, which relays stimuli between the auditory and visual areas (Geschwind 1972). Lesions in these areas will result in auditory-verbal agnosia. The patient will be unable to recognize or understand the word he hears. Although he can speak, his words convey little or no thought content.

2. *Broca's Area*

This is in the frontal lobe adjacent to the region of the motor cortex that controls movement of the lips, jaw, tongue, soft palate and vocal cords (Geschwind 1972). It contains the engrams for memory of motor patterns of speech. Damage to this area can result in motor aphasia. The patient will have difficulty in articulating the words he wishes to use. Speech will no longer be fluent and may be laboured.

3. ***Area 37 and Posterior Part of Area 21***

These areas are associated with formulation of language and recall of words. Lesions here may produce anomia, amnesic aphasia, or defects in language formulation. The patients will be unable to recall familiar words and phrases or names of known persons, objects and phrases.

4. *Angular Gyrus*

The angular gyrus in the parietal lobe is related to visual recognition of the symbols used in such activities as reading, writing and

arithmetic. Damage of this area can cause alexia (impaired reading ability), agraphia (impaired writing ability) and acalculia (impaired ability to calculate). The patient may have difficulties with the use of numbers, letters or other symbols. All these can occur in a variety of combinations (Strub et al 1977).

Types of Aphasia

There are many terms that qualify aphasia and some are used interchangeably: Localisation of the lesion and identification of the underlying pathological and aetiological conditions, are essential to the physician who is responsible for establishing a diagnosis and instituting an appropriate plan of treatment for the patient with aphasia. Various terms used to classify tyhpes of aphasia are listed below. It must be emphasized that regardless of the nature and exact locations of the lession causing aphasia, care should be planned according to the resultant deficit.

1. Broca's aphasia also referred to as expressive, motor, anterior or nonfluent aphasia.
2. Wernicke's aphasia also referred to as receptive, sensory of fluent aphasia.
3. Global aphasia - combination of Broca's and Wernicke's aphasia.
4. Conduction aphasia.
5. Isolated speech area - the connection between Wernicke's and Broca's areas remain intact, but all other connections between the speech areas and the rest of the brain have been destroyed.
6. Amnesic aphasia.
7. Pure alexia.
8. Pure word deafness - preventstimuli from reaching Wernick's area. Patient unable to comprehend, write to dictation, or repeat what is said. Speech demonstration correct thinking and use of language. The ability to read and write remains intact (Mohr et al 1977).
9. Pure Word Blindness - Patient loses the ability to read and name certain objects, although his power to comprehend, write and repeat spoken language remains intact.

Prognosis

The prognosis for recovery from aphasia depends on a variety of interrelated factors that include sight and extent of the lesion responsible for the language deficit, the age and general health of the patient and his premorbid personality, intellectual capacity and educational background.

The prognosis for recovery is always better for patients with visual or tactile agnosias than for those with an auditory agnosia. When all three areas - visual, tactile and auditory - are damaged, prognosis for recovery is poor, since the speech therapist has no viable avenue of approach to the patient.

Psychological Aspects of Aphasia

The psychological impact of loss of language function is so overwhelming Thwarted by losses he cannot understand, he may lash out impulsively, throwing objects and striking those around him. Attempts to help the aphasic person socialize are made extremely difficult because of his impaired ability for abstract thinking. Brain damage resulting from stroke will have destroyed his ability to evaluate situation as a whole. Most of the patients with aphasia exhibit considerable inconsistency in behaviour, since they may have lost the ability to exercise practical judgement.

During acute stage of stroke, many patients with aphasia are emotionally liable with frequent outbursts of laughter and/or tears. These episodes are thought to result from tension or embarrassment, and usually stop, once the patient's neurological state stabilizes. Persistent euphoria may be an indication of regression or an underlying depression. Psychosis can develop in a patient with aphasia and is important to differenciate a from b. Unfortunately, psychotherapy is not useful for moral patients with aphasia because of their inability to verbalise their feelings and their frequent misinterpretations of how others respond to them. (Schiwell et al, 1964).

Patients with aphasia are usually very much aware of non-verbal communication from

busy hospital staff, friends and relatives. They are quite sensitive to looks and gestures of annoyance and impatience with their delayed or seemingly inappropriate responses. The family and friends of a stroke patient can provide a lot of help, and encourage the necessary motivation for speech recovery. Speaking to the patient clearly and slowly in a normal friendly voice creates a relaxed situation for communication. Repetition may reinforce message and ensure full understanding. (Speaking in an uncomplicated straight forward member) as if expected to be understood can also help in Speech Therapy. The use of gestures should be encouraged to aid communication while being cheerful in the approach used.

It is important that members of the family, and in particular the spouse, should maintain precious interests and routine of activity to reduce the strain of constant involvement with stroke patient.

Role of Medical Social Workers in the Management of Stroke Patients:

The Medical Social Workers are very relevant and important in the total care of stroke patients. They perform a very useful role to both the patient and his family. The Medical Social Workers who are professional helpers and change agents attend to the Social, emotional/psychological and environmental factors that often accompany an illness. Their roles and duties for the stroke patient start right from patient's arrival into the hospital, i.e. from the clinic, on to the sick bed, or and until the patient is ready for discharge. They even give follow-up services after the patient has been discharged home:

(i) The Medical Social Worker serves as the link between the patients and other professionals in the hospital.

(ii) She also serves as a link between the patient and his home.

(iii) She conducts occasional and adhoc home visits (the initial and the follow-up ones) to assess and reassess the home/social situations. She creates and ensures that the condition at home is a conducive and enabling one for the patient, most especially the social relationships between the patient and his relatives.

(iv) The Medical Social Workers also help the patient to tap local resources towards his treatment. She is also initially or solely an adviser on other social issues such as games and recreation which are suitable for the patients.

The effect of stroke on adults is very devastating. a number of them, as a result of language problems are not able to return to their regular jobs. One other major step and role of the Social Workers here is to counsel the patient along this line. The patient needs counselling in terms of accepting that some of the deficits he has will remain with him for life. As a result the Medical Social Worker helps the patient to develop new interests being a Psychological and Social Therapist. The Medical Social Worker works in cooperation with the patient and his family towards his self realization, which include minimum suffering, joy, and pleasure, that would make him be fulfilled in life.

Children with stroke:

It is often believed that children do not suffer from stroke. Experience has shown that this is not always true. For most of these children, the burden weighs heavily on the parents, especially the mother, as it is often expected in our society. Under such a situation, the Medical Social Worker performs her role as a Counsellor. She needs to counsel the mother and teach her some coping mechanisms.

As it is expected, the joy of a mother is to have good and normal children, that is why the Medical Social Worker has to boost the morale of the parent with words of encouragement, and build her up emotionally in accepting her child's condition. She also needs to bring in the father and make sure he is not left out in the care of patient. He must give his love to the patient; at the same time, the patient should not be over-pampered or over protected.

The siblings also will heed counselling. They need to be counselled and helped to know that the child's development cannot be like the other "normal" children.

This will make the level of expectations for this child commensurate with his disabilities. With all these, there will be a reduced tension for the parents, sibblings and the child himself.

CONCLUSION

Aphasia, the loss of language resulting from stroke is a devastating experience. It is not a progressive condition, but, an aphasic patient is not mentally ill. In addition to language disorders, aphasic patients usually have some physical disabilities and there are sometimes great changes in personality and general behaviour. No medicine, drugs or surgery have been known to nurse aphasia. Only speech therapy has been found to be the rehabilitative regime, but patients should not be forced to attend speech therapy sessions. Forcing the patient to accept training unwillingly may forever close the door to speech rehabilitation for him or her. Unfortunately, it is impossible to predict for our patients how long speech training will take. It is generally agreed that aphasia retraining is a long and slow process. The patient's family and friends must think in terms of months and years, and not days and weeks.

Considering everything, the family of an aphasic patient can best be helped to make improvement by creating a warm, permissive atmosphere at home. Whatever feelings the family may have will naturally "rub off" on the patient. He must be permitted to attempt communication whenever possible in a setting where his mistakes will not be ridiculed or severely criticised. A patient's efforts to improve should always be praised. It is essential that the family of a stroke patient who is aphasic should understand the nature of aphasia and its limitations. They should be realistic in their expectations for progress. The family should keep its goals for the patient limited to those which he can reach in a short time. Long range planning depends on the many if's. When a patient cannot achieve the long range goal within a short time, it gives him a sense of failure. The understanding and accepting family can often provide the setting for progress, even in the face of severe aphasic conditions.

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