THERAPEUTIC STRATEGIES AND MATERIALS FOR DYSPHASIA

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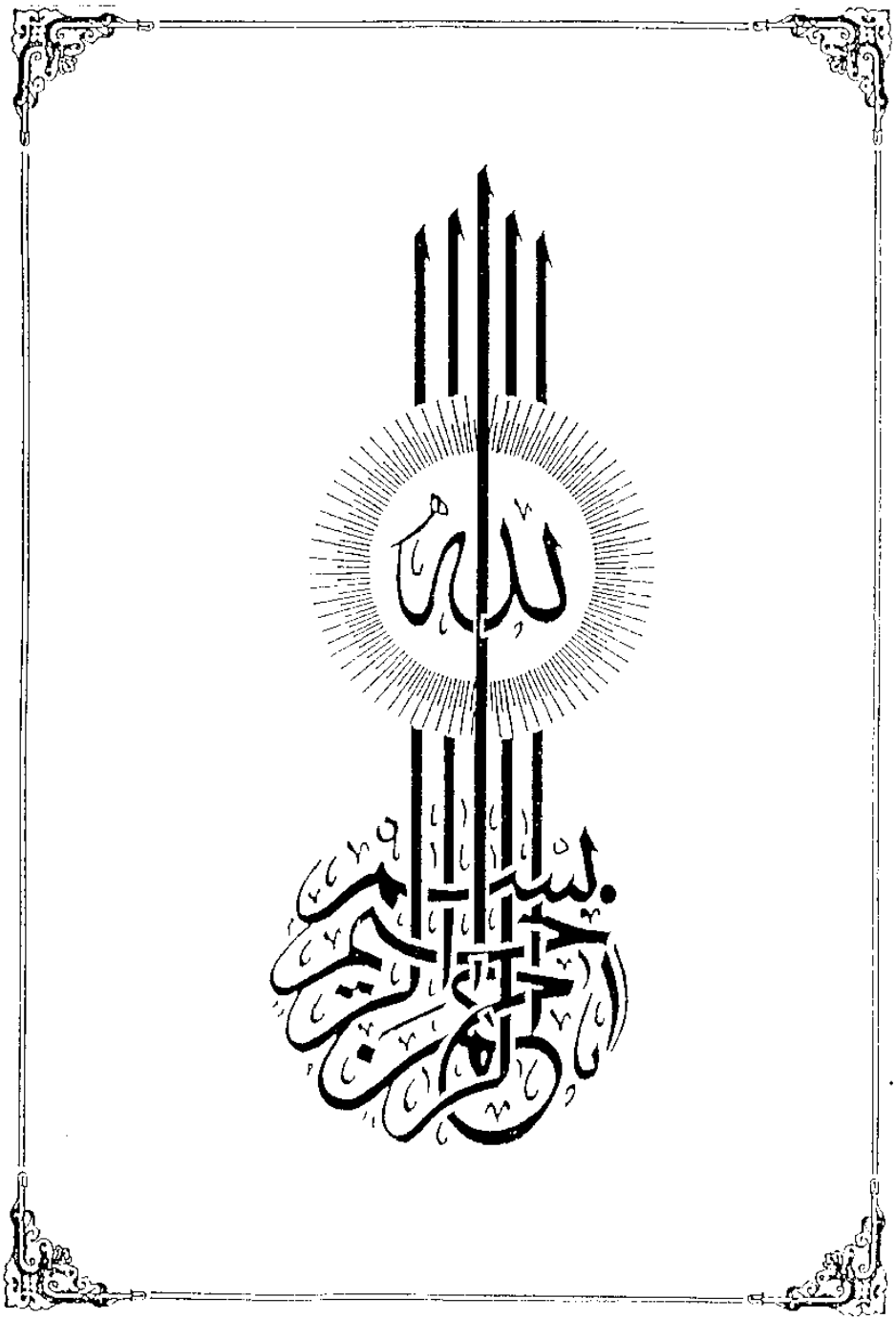

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INTRODUCTION

The need for socialization is the core of human existance and the desire to communicate with others is the essence of that socialization. Language is the basic from of this communication which is called "the human essence".

Dysphasia which is a language impairment is defined as an impairment in the individual's linguistic (content and form), communicative (use) and language related cognitive system (thinking and memory) regardless of which input or output modality is used. Stroke is by far the commonest cause of dysphasia. The dysphasic patients lose a part of their personality and are impaired in their ability to maintain interpersonal relationships, to convey wants and needs and to be mature, selfreliant, and selfactualized persons.

Evaluation of dysphasic patients is a very important step in the therapy program. This evaluation is done via careful history taking, good clinical assessment of the patient as well as language tests which put scoring procedure on a quantitative basis. Examples for these tests are, a modified scoring system for testing language disability in dysphasic patients language modalities test for aphasia,

Minnesota test for differential diagnosis of aphasia token test, porch index of communicative ability and Neurosensory center comprehensive examination for aphasia.

The adequacy of dysphasia therapy program is measured by its ability to cope with four major complications which are:

A. Patient's variables which influence patient's responge to therapy as causes, duration of illness and onset of therapy. The Patient's variability is reduced by applying rigid selection criteria as age, education, etiology, lesion localization, medical status, severity and time postonset of dysphasia therapy.

B. Spontanous recovery which is the improvment in language ability in untreated cases during the first few monthes postonset resulting propably from physiological restitution. How this occurs, when, or for how long, it continues to be uncertain

C. Defining A no-treatment group:

The scientifically acceptable test of any treatment is to select patients who are similar in the important charachters and classify them randomly into treated and

untreated group. If the treated group improves more than untreated group, then therapy is considered to be effective.

D. Specifying the treatment:

Confirming a specific therapy for a specific patient will explore the efficacy of that therapy on that patient. This is because it is easy to know how much therapy the patient recieved but it is almost impossibl to specify exactly how pateints were treated.

Finally rehablitation of dysphasic patients amis at restoring or reestablishing the individual's previously learned language.

Aim of the work

The aim of this work is to produce material for the various intervention models used in dysphasia rehablitation in order to provide a bank of therapeutic material and to help in unifying the approach of intervention in the unit of Phoniatrics, Ain Shams University.

DEALING WITH AUDITORY COMPREHENSION DEFICIT

Auditory comprehension is the mental processes by which listeners take in the sounds uttered by speaker and use them to construct an interpretation of what they think the speaker intended to convey (**Clark and Clark, 1977**). It involves each and every level starting from initial vibration of the tympanic membrane by sound waves to ellectrochemical transfer in the cochlea and brainstem, through the complicated association and abestraction processes that result in interpretation of the speaker's intent (**MC Neil and Kimelman, 1986**). Auditory comprehension must pass via stages of, stimulus detection, stimulus discrimination, retention, categorization and sequential retention in order to be successful comprehension (**Aten, 1972**).

Thus the patterns of auditory comprehension impairment may be in the from of; slow rise time, noise build-up, information processing lag-alternately accurete and inaccuret performance within a message, intermittent auditory imperception, capacity deficit and retension deficit. These

patterns may be presented as a mixture or one deficit may be predominant over the others (Lapointe and Colleag, 1974).

The left posterior temporal and inferior parietal regions are critical for semantic processing. (Hart J.J and Gordon., 1990). It was found that auditory comprehension impairment showe slow recovery with poor prognosis if the lesion affectes the left postrosuperior temporol region (PST), but if the lesion is out of (PST) there is rapid recovery and good prognosis (Selnes, Niccum and Rubens, 1982). Also. there is positive correlation between the recovery of comprehension and the lesion's size especially in Broca's dysphasia (Kertesz A., 1988).

The assessment of auditory comprehension is a very important step in treatment program. The tests which are used for assessment are many such as:

1- A modified scoring system for testing language disability in dysphasic patients (Kotby et al, 1981)

Which contains several items needed for testing and elvaluating the different aspects of language of the patient.For example,items for testing. Auditory memory span, automatic and spontaneous speech, understanding speech,

understanding written text, reading and also for writing. Each. item is tested by especial tasks .Finally calculation is done.

2- MTDDA (Schuell, 1965):

Which contians tasks for evaluating auditory disturbances which are typical of standarized batteries. These tasks include recognizing common words, discriminating between paired words, recoginzing letters, identifing items serialy named, understanding sentences, fllowing directions and understanding paragraph.

3- Token test (DeRenzi and Vignalo, 1962):

Which is considerd as an accurate and senstive indicator for the presence of dysphasia. It consistis of 20 tokens that vary in size, color and shape. These tokens are placed in a standarized array before the person to be tested. After that the examiner presents a series of spoken commands that require the person to "point to" or "manipulate".

4- Auditory comprehension test for sentences (ACTS) (Shewen, 1979):

Which evaluates comprehension in detail at level of sentence. The sentences in this test increase gradually in

length, lexical difficulty and syntactic complexity. The examiner reads the sentences aloud and the person being tested responds by pointing to the correct picture. A performance norms are provided and the responses can be quntitatively analyzed by observing the error type.

5- **Functional auditory comprehension task (FACT) (Lapointe and Horner, 1978):**

Which incorporates some features of the performance that might be more related to the demonds of daily living auditory comprehension. It also retaines some control over the stimulus variables.

- **General consideration regarding of the auditory comprehension deficit treatment.**

Many principles must be in front of vision of the clinician while dealing with auditory comprehension deficit. Firstly he should assess the patient properly via carful history taking, good clinical examination and by the use of the sutabile language assessment tests. This assessment should be done before the starting of the therapy to prepear the appropriate tasks of treatment. After treatment startes,

the assessment is done from time to time regularly for evaluation of the patient to achive the real goal of treatment (Wertz, Rosenbek and Lapointe, 1989).

The clinician has to considere and address both the linguistic and cognative processing factors such as the message length must be appropriate to enhance the comprehension performance of the patient (Flowers and Danforth, 1979; Albert and Bear, 1974; Brookshire, 1978 a). He should adjuste his linguistic features in accordance with the patient's needs (Basso et al, 1979). Good clinician must involve other significant persons who are in relation with the pateint to heighten his comprehension performance during the rest of the day (Czvik, 1977).

The stimulus given during the session must have special character to improve and enhance the comprehension's performance of the patient. It should be intensive auditory stimulation and not necessarily to be conducted through auditory channels alone.It also should be salient, prominent, unambiguous and as clear as possible (Darley, 1982). The use of appropriate rate and pauses increase performance i.e slower rate and more pauses (Lasky et al, 1976). The presence

of emotional content in the stimulus improves the patient's performance (Boller et al, 1977); Reuterskiold, 1991). Also the absence of back ground noise during the stimulus presentation is prefered (Skelly, 1975). The increas of stimulus's redundancy improves the patient performance (Gardner et al, 1975).

The tasks for auditory comprehension treatment should be selected in accordance with the patient overall language and comprehension abilities. They should be meaningfull, presented in communicative context and should have some practical value for the patient.They are prefered to be presented in variab techniques without affecting the difficulty of the tasks. This is better to avoid loss of intrest of the patient. The tasks's sequance should move gradually from the less difficult to the more difficult one hand in hand with the patient's ability and the tailored response. During the session alerting signals is given to improve the performance of the patient. (Chapey, 1986; Loverso and Prescott, 1981).