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The needs of aphatic patients for verbal communication as the element of life quality

Verbal communication allows the man to learn about the surrounding world and allows him to express the thoughts, feelings and needs. Therefore, people with acute speech disorders, i.e. aphasic patients suffer not only because of the problems of communication but mainly due to the deterioration of their social status, which in turn, changes the quality of life.

The quality of life according to K.Walden-Gałuszko can be simply defined as the image of an individual life situation over some period of time. In other words, it is the assessment of some fragment of life which occurs between a man – the subject – and the surrounding environment as well as the internal environment (4).

The quality of life is defined as the state of well-being consisting of two elements: ability to cope with everyday tasks, which is reflected by a good mood on the physical level, psychical level and social level and the satisfaction of such functioning on all of the mentioned levels.

The term *aphasia* (from Greek – a-fasis – muteness) refers to an impairment of the reception of linguistic contents, using them and expressing them (transmission), which is due to some organic defect of the brain. This definition eliminates difficulties of perception, memory, or is connected with learning. There are many classifications of aphasia developed by specialists of various disciplines dealing with man and his higher psychical functions.

In the neurological practice the applied classification of aphasia is the one by T.H.Weisenburg and K.C. Mc Bride, which was developed on the basis of analysis of speech disorder syndromes. The authors distinguished the following kinds of aphasia: expression aphasia, or motor aphasia; reception aphasia, or sensory aphasia; mixed-type aphasia, or expression-reception aphasia; amnesiac aphasia global aphasia, or total aphasia (3).

Expression aphasia, also called Broc's aphasia, results from the injury of rear part of lower frontal gyrus. There is a different extent of aphasia – from complete elimination of speech to slight deficit consisting only in difficulties in finding a proper word. The examination of aphasic patient is never an easy task. With less severe difficulties the patient's speech is characterised by limited vocabulary or repetition of the same word many times with long intervals between individual words or phrases. Patients with expression aphasia find grammatical construction of sentences difficult. They are willing to use simple sentences with more nouns and verbs than adjectives or adverbs and this gives their speech a style of telegraphic transmission. Such disorder is defined as non-grammaticality. The expression difficulties may also concern writing. Aphasic patients present the same difficulties in writing as in speaking. Very rarely is disgraphy described in patients who did not reveal any visible difficulties in verbal expression.

Reception (sensory) aphasia results from the injury of the area of Wernicke in the dominating hemisphere. The basic difficulty consists in the impairment of understanding of the speech heard and very often of the written words. Patients with reception aphasia have difficulties in understanding everything that is said to them. The problem results from the inability to understand the speech because the hearing sense remains normal (examined by audiometric tests). A patient with sensory aphasia can speak fluently. There are people who speak a lot but they do not use grammatical constructions and express themselves vaguely. Because due to the difficulties in understanding the perceived speech they cannot control their own verbal expression (everything that they say), they may not realise that their comments are not correctly made. In reception aphasia understanding of a written text is impaired. These difficulties are called alexia (dyslexia), and sometimes "word blindness". Patients can recognise individual letters but they are not able to perceive the words as meaningful wholeness.

The quality of life with impaired verbal communication is definitely changed and requires a specialist therapy.

The present study presents a programme of 8-week re-education of speech in 10 patients with motor aphasia ans 10 patients with sensory aphasia. The aphasic patient can and should be assisted in overcoming the difficulties in communicating. It does not mean, however, that in each case we should expect an instant improvement of the patient's condition and that the results of re-education will be consistent with our expectations. On the contrary, aphasic disorders continue in spite of great efforts made by the patient and the caregivers. But even then – with appropriate methods of work applied – we can help the patient by facilitating the communication in the important matters connected with his everyday needs. Even such a result of re-education may be considered important.

METHOD

The presented study is an example of speech re-education performed on 10 patients with motor aphasia and on 10 patients with sensory aphasia.

The aim of the study was to define the extent of speech disorders and to design a programme of speech re-education, which would lead to maximum integration of patients with the society and thus improve their life quality.

With relation to the present speech disorders the following study questions have been put forward: 1) What are the current verbal possibilities used for communicating with the environment? 2) How can the verbal communication disorders be reduced to ameliorate the patient's life quality?

The performed studies are qualitative studies and consider selected factors connected with the effectiveness of speech re-education. The qualitative studies are characterized mainly by a global approach directed towards inductive description of the context in which the studied subject exists in order to understand the situation similarly as the studied person.

To answer the questions, a method of qualitative analysis of the case was used (also called a method of individual cases or clinical method) and the analysis of patient's medical documents. The documents provided data concerning the neurological test and considering the evaluation of motor and sensory functions, reflexes ans muscular tension and personal data: age, gender. The qualitative method or the case analysis, was used to describe and evaluate speech in the selected group of 20 patients hospitalised in the Rehabilitation Department of Specialist Hospital in Lublin. 10 patients had speech disorders of motor aphasia character and the other 10 patients were with speech disorders of sensory aphasia character.

The applied research tool was: "W. Łucki set of tests for examining cognitive processes in patients with brain injury according to procedure designed by A. Łuria". In these tests the speech is examined (transmission and understanding activities). Diagnostic procedure in this examination concentrates on the qualitative analysis of verbal communication disorders. The

following stages are considered in examination of speech transmission: dialogue speech, automatic verbal sequences, naming (of objects, activities), repetition, story telling, writing. The following stages are considered in testing speech understanding: simple instructions, complex instructions, flexion constructions, proverbs, reading.

RESULTS

Qualitative analysis of speech (transmission) in patients with motor aphasia was based on accepting some categories, i.e. dialogue speech, automated sequences, story telling, repetition, writing (Tab. 1).

Among 10 patients with motor aphasia there were 5 men aged 54–73 and 5 women aged 48–78. With reference to the extent of aphasic disorders one person was found with a slight disorder, i.e. disorder of story telling and four patients with deep aphasia, i.e. with disorders of dialogue speech, automated sequences, naming and story telling. In each of the studied persons repetition of

Table 1. Qualitative analysis of speech disorders in patients with motor aphasia

No.	Data from patient's medical card (neurological diagnosis, patient's age	Dialogue speech	Automated sequences	Naming	Story telling	Repetition	Writing (left hand)
1	Right hemiparesis post stroke M age:54	-	+	+	-	+	-
2	Right hemiparesis post stroke F age: 78	-	+	+	-	+	-
3	Right hemiparesis post stroke F age: 62	+	+	+	-	+	-
4	Right hemiparesis post stroke M age: 70	-	-	-	-	+	-
5	Right hemiparesis post stroke F age: 48	-	-	-	-	+	-
6	Right hemiparesis post stroke M age: 73	-	-	-	-	+	-
7	Right hemiparesis post stroke M age: 55	-	+	-	-	+	-
8	Right hemiparesis post stroke F age: 69	-	-	-	-	+	-
9	Right hemiparesis post stroke M age: 67	+	-	+	-	+	-
10	Right hemiparesis post stroke F age: 66	+	-	-	-	+	-

+ STANDARD
- DISORDER

M - man
F - woman

isolated articulated sounds (eg. a, u, m), repetition of words and sentences were not disordered. The qualitative analysis (reception) of speech in patients with sensory aphasia was based on accepting some categories, i.e. simple instructions, complex instructions, flexion phrases, metaphors, reading.

In the group of patients with motor aphasia there were 6 men aged 44–69 and 4 women aged 39–50.Four people had disorders of speech recognition of simple instructions, eight patients had disorders in understanding complex instructions. All of the studied subjects did not understand flexion compounds and metaphors. In seven casses there were reading disorders.

The programme of re-education realised in patients with motor aphasia was based on literature concerning the aphasic issues and methods of re-educating them by Maruszewski (2). However, the elements of the programme including such instructions as stimulation of the energy system of brain and learning to write with the left hand (name, surname, address) have been defined by the authors as a result of long lasting studies on the therapy problems of people with motor aphasia.

The programme of speech re-education in patients with motor aphasia is as follows: stimulation of the energy system of the brain, articulation of sounds, articulation of word, construction of simple sentences, construction of complex sentences, construction of elaborated statements, learning to write with a left hand (name, surname, address).

The programme of re-educating patients with sensory aphasia was also based on the literature related to aphasic issues and the method of re-educating them according to Maruszewski (2). The elements of the programme including such points as stimulation of the energy system of the brain and learning to read have been defined by the authors on the basis of long lasting studies on the problems of therapy of patients with sensory aphasia.

When designing the re-education programme for a particular patient, not only detailed decisions should be taken concerning the methods intended to be applied, the material to be used, etc. It is also necessary to solve more general questions the more detailed decision depend on. The issues are: the aims of re-education, the sequence of eliminating individual disorders, etc. It is a specific strategy of re-education the selection of which depends on some factors:
1) general health condition of the patient – the extent and the kind of disorders; physical condition and efficiency, the attitude to re-education and the extent of motivation for participation in the activities, etc. 2) time of the proposed re-education – how long the patient will remain under the protection of the instructor, 3) patient's environment to which he is going to return after dismissal from the centre, he is staying at present and learning what skills will be especially important for him to be able to communicate with the environment.

CONCLUSIONS

1. Every injury of the brain can lead to two kinds of results. i.e. changes of a permanent character, consisting in the irreversible damage of specific areas of the brain and to the dynamic changes, non-permanent, changing in time and connected with the cerebral oedema, circulation disorders and also psychogenic changes. It is clear that whichever of the changes conditioned the aphasic disorders, their recession will be connected with other processes taking place in the brain.

2. In case of dynamic changes we deal with a permanent damage of areas of the brain essential for speaking. These areas still exist but due to various reasons they remain inactive, so if the became activated, aphasia will recede.
Sometimes such an activation takes place by itself – this is explained by the fact that sometimes even very extensive disorders observed directly after brain damage recede without any special re-education efforts. In many cases dynamic changes continue for a long time and their recession requires application of special methods.

3. However, there is a different mechanism of speech restoration when its disorder results from the permanent and irreversible damage of the areas of the brain essential for speech. In such situations the restoration must be based on the application of unaffected cerebral structures. In people with limited domination of the damaged hemisphere the role essential for speech is played by the other – not damaged hemisphere by taking over the function of the damaged hemisphere. However, if the damaged hemisphere was previously totally dominating for speech, we should expect that taking up of its function by the other hemisphere occurs to a smaller extent, however, a much bigger role is played by undamaged parts of the dominating hemisphere. But in both cases we encounter the development of new speech mechanisms.

4. Direct practising of the disordered function calculated for using the maintained possibilities of the damaged structure is only slightly effective because the size of damage permanently excludes the possibility of restoration of a given function in the form it existed prior to the damage. Then the restoration to the normal condition is possible only when the "specific restructuring" of the mechanisms regulating a given function occurs. It consists in the use of capabilities existing in the other intact parts of the brain which so far have not participated in the regulation of a given function, but providing the specific method of re-education was applied. The patient does not have to perform a given activity precisely the same way he used to do it prior to the disorder, however, it is important that the activity should become possible for him to perform and that he could realize his goals. In the case of an aphasic patient such a goal is communicating with the environment.

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SUMMARY

The fact of using the language by man confirms the specific properties of his brain. Man is not able to learn this skill without a contact with speaking and human environment. This skill of linguistic communication with others allows man to get knowledge about the surrounding world and on the other hand it enables him to express his thoughts, feelings and needs. Therefore, people with serious speech disorders, i.e. aphasic patients, suffer not only from the problems connected with communication but mainly because of the deterioration of their social status that consequently will change their life quality. Generally, they cannot cope with the tasks they are facing both in their personal and professional life.Speech is defined as the process of communication; the act in which the transmitter sends verbal structured message (statement), and the receiver perceives this message or understands its contents. The present paper presents the realised programme of 8-week speech re-education of 10 patients with motor aphasia and 10 patients with sensory aphasia.The examination of speech was performed on the basis of clinical-experimental tests developed by A. Łuria. Diagnostic treatment in this test is focused on the qualitative analysis of the disorders structure.

Potrzeby komunikacji werbalnej chorych z afazją jako element jakości życia

Fakt władania przez człowieka językiem stanowi o specyficznych właściwościach jego mózgu. Człowiek nie potrafi opanować tej umiejętności bez kontaktu z mówiącym i ludzkim otoczeniem. Właśnie ta umiejętność językowego porozumiewania się z innymi umożliwia człowiekowi z jednej strony opanowanie wiedzy o otaczającym go świecie, z drugiej zaś pozwala mu wyrażać swoje myśli, uczucia, potrzeby. Dlatego też ludzie z poważnymi zaburzeniami mowy, na przykład chorzy z afazją, cierpią nie tylko z powodu problemów w porozumiewaniu się, lecz przede wszystkim ze względu na obniżenie statusu społecznego, co w konsekwencji zmienia ich jakość życia. Z reguły bowiem nie potrafią poradzić sobie ze stawianymi im zadaniami i to zarówno w życiu zawodowym, jak i osobistym. Mowa definiowana jest jako proces porozumiewania się, akt, w którym nadawca przekazuje słownie, językowo ustrukturalizowany komunikat (wypowiedź), a odbiorca komunikatów percypuje, czyli rozumie jego treść. Niniejsza praca prezentuje zrealizowany program ośmiotygodniowej reedukacji mowy u dziesięciu chorych z afazją motoryczną i dziesięciu chorych z afazją czuciową. Badanie mowy oparte zostało na próbach eksperymentalno-klinicznych opracowanych przez A. Łurię. Postępowanie diagnostyczne w tym badaniu koncentruje się na jakościowej analizie struktury zaburzeń mowy.