

32. The Rehabilitation of Patients with Apallic Syndrome in the Therapeutic Community

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One of the main principles in the rehabilitation of apallic patients is that rehabilitation has to be started in every case as soon as possible. More precisely, the rehabilitation of an apallic syndrome has to be started in the acute phase of a severe brain damage which corresponds to the acute midbrain syndrome. During this phase, which was termed "preparatory phase" (Gerstenbrand, 1968), all precautions should be taken to provide the most favorable basis for the actual rehabilitation. The main precautions taken should concentrate on the prevention of cachexia, decubitus, contraction of joints, and periarticular ossifications. Thus a favorable basis for rehabilitation could be obtained. In this phase the application of hypercaloric nutrition and a special physiotherapy using the tonus-regulating reflexes are of

special importance. While the enormous consumption of energy is compensated by the hypercaloric nutrition, the physiotherapy effects an indirect training of the motoric functions and causes a simultaneous activation of the reticular system leading to a reactivation of vigilance.

In the following stage, i.e. the stage of active rehabilitation, the patient has to be transferred to a special rehabilitation unit. At the time of transfer, the apallic patient should be in a good general condition with a stabilized feeding regimen. No complications with tracheostoma should aggravate the first phase of remission, which is the beginning of contact with the surroundings. Patients in a full state of an apallic syndrome should be transferred to a rehabilitation unit only if the results of the check-up examination (EEG, PEG, xenography, EMG) show signs of a good prognosis. The problem of taking care of those patients with an apallic syndrome showing no signs of a remission and from whom no remission can be expected, is not yet solved. For the aftercare of those patients, the installation of a special unit which can meet the requirements for treatment of these severest cases must be suggested. If apallic patients are transferred to a unit not suitable for their care, most of them will die within a short time despite modern medical treatment. According to our experience, a rehabilitation unit for patients with severe brain damage should consist of 18-20 patients of both sexes selected independently of the degree of the brain damage and its etiology. Patients with an apallic syndrome can be added to such a group. All patients live in a large family in a community area, complete with sleeping, living, working, and gymnastic rooms. A rehabilitation center may consist of several such units. Every rehabilitation unit has to be cared for by a staff comprised of specially trained medical and nursing personnel. The medical staff includes, besides neuropsychiatrists, one or two psychologists, one orthopedist, a neurosurgeon, an otolaryngologist, and an ophthalmologist. Of special importance is the close cooperation with an anesthesiologist of the intensive care unit. In the ward staff are

Every rehabilitation unit is divided into subgroups: the mobilization group and the special therapeutic or achievement group (*Leistungsgruppe*). After transfer, the new patient, irrespectively of the severity of his brain damage, enters the mobilization group consisting of maximally five patients in close spatial contact with the patients of the other subgroup. The new patient transferred to the mobilization group of the rehabilitation unit is evaluated for brain damage by clinical examination and other diagnostic procedures such as EEG, EMG, X-ray of the skull and the cervical spine, pneumencephalography, and laboratory tests. Moreover a battery of psychological tests is carried out to obtain a performance profile. This profile demonstrates various concentration, and motor and speech functions. Based on the results of all the examinations, an individual rehabilitation program is designed. The program also considers the individual's social and professional status.

After transfer each patient is incorporated in the mobilization group. For adaptation to the new environment, no more than 2 weeks are usually necessary. The check-up mentioned above is carried out after the time of adaptation. The examinations have to be performed as carefully as possible. In some cases the pneumencephalography can be postponed to a later date especially when this examination was already performed during the period in the intensive care unit. In the beginning of treatment at the rehabilitation unit, the maintenance of hypercaloric nutrition has to be strictly observed. Sometimes the nutrition regimen is only possible with a combination of parenteral nutrition and tube feeding. This regimen, however, should be gradually replaced by spoon-feeding. For this purpose the oral reflexes can be utilized. The progressing remission, especially the entrance into the Klüver-Bucy phase, supports this development. The pseudobulbar paralytic symptomatology in cases with anoxic brain damage mostly disturbs oral feeding.

In the rehabilitation period in which the remission state of an apallic patient is comparable to optic dominance of the 3-month-old-child (Müller, 1968), the mother role of the attendant nurses is of great importance to the resumption of contact with the outside world. This also applies to the remission of speech ability. Naturally it is necessary in this state of rehabilitation to continue all the intensive care measures such as control of electrolytes, caring of decubitus, prevention of secondary peripheral nerve lesions as well as the application of special physiotherapy (tonus regulating reflexes) with increasing use of the active physiotherapeutic methods. The logopedist should start as soon as possible with exercises. Before beginning with verbal contact it is advantageous to teach the apallic patient a code-system (twinkling of eyes, etc.) with the help of which he is able to answer.

Equivalent to the mother role of the nurses, especially to that of the head nurse of the unit, the physicians (mainly the head of the department) have to assume the position of the father in the social relations of the patient. Praise and admonition as well as constant encouragement and exhortation are necessary.

In the rehabilitation unit those patients who have already achieved an improved state or who are suffering from a lesser form of cerebral damage may be called upon to help in the general care of the apallic patients. Likewise, their spontaneous offers of help should be encouraged. These patients can assist the nurses in feeding and can do other simple services in the care of the severe cases, as well as give assistance to the logopedist and physiotherapist. Moreover they are establishing a verbal contact with their "fellow-sufferer" and are exerting themselves in a cordial way for the severely injured.

At the end of the Klüver-Bucy phase, the apallic patient who is already out of bed may

the common singing and reading exercises or to watch television. After a time of adaptation the recovering apallic patient may participate in the exercises, and while his remission is progressing he will become a full member of the achievement group. The time which a patient has to remain in the mobilization group depends on the severity of the brain damage and the arising complications. It varies from a few weeks to several months. In rare cases it is even necessary to interrupt the rehabilitation and to transfer the patient to a nursing home, a decision causing a lot of problems in every case.

In the achievement group the rules and functions of the therapeutic community are fully applied. As a result of the different grades of the brain damage of the group members and the variety of their cerebral failures, and because of the introduction of new patients who are at the beginning of their remission course, an "ordering of achievement" arises which places "achievement demands" upon individual patients. The patient who is not yet very active is cared for by one who is already in an advanced state of remission and thereby receives an increased impulse for activity. Noting the difference in the recovered disturbed brain functions and comparing one's own improvement to the others seems to be an incentive to the patients. Compensatory actions between the single members of the community develop. A patient unable to walk by himself will be supported by a partially recovered stroke patient. In this system, the number of paramedical persons is at the same time increased, thus providing assistance to the members of the mobilization group.

Productivity of the single patient is stimulated by group dynamics, as each patient wants to do better than the other. Performance differences provide incentive and oblige the more disabled patients to increase their efforts in order to attain the standards set by their fellow patients. Besides individual production, there is a "collective compulsion" to produce. The group incentive must be directed not only toward achievement demands and achievement results, but also above all toward a positive cohesion within the group, which expresses itself through reciprocal aid and support. According to his premorbid personality and depending on the grade of his cerebral damage, every patient is entrusted with certain tasks within the group community. Subgroups are formed, based on the clinical picture and professional interests. Patients of other rehabilitation units of the rehabilitation center can be added to special subgroups. The achievement group has a fixed daily program which is determined by the patients themselves. It contains the schedule for the physiotherapy, for the training of the higher brain functions as well as for the spare time and regulates the events of the day for the whole group. One of the patients should be responsible for the adherence to the daily program and also for the positive incentive in the group. He should also act as a speaker for the whole group. For this important task a patient should be chosen who is at an advanced stage of rehabilitation and who appears to be particularly suited for it.

Between the entire rehabilitation group and the staff team, a dynamic relationship should be created. The responsibility for this may be shared by the head of the unit and by the head nurse. The various roles in the staff team have to be balanced. Inconsistency immediately leads to group unrest which has a negative effect upon the readiness to produce achievements. Every week the status and progress of each patient is evaluated in regular staff sessions. Regular checks such as EEGs, laboratory tests, psychologic testing for the performance profile and other examinations are made. With a consequent establishment of continually revised programs, the achievement demands are directed for the whole group.

A further factor in the group dynamics is added by the necessary inclusion of relatives and personal friends as well as friends of the professional milieu. Relatives and friends should be acquainted with the type of brain damage and with the expected change in the personality of the patient. It is necessary to explain to them as much as possible in order to produce a positive influence on the injured. The cooperation of relatives and friends is particularly important in the case of an apallic syndrome. In a further state of remission the method of bifocal group therapy can be used.

In the rehabilitation of the apallic patients, the therapeutic community creates a useful framework and may be regarded, especially for those cases of severe brain damage, as a provisional social environment that prepares the patient for the reintegration into normal society.

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