

OCCUPATIONAL THERAPY IN THE TREATMENT OF CONGENITAL ATHETOSIS

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Congenital athetosis presents many problems that are best solved by occupational therapy technics. The athetoid child is handicapped not by the loss of motor nerves, as in the spastic type, but by excess purposeless movements superimposed upon the voluntary patterns. In addition he usually develops an increased tension in fixing muscles in an attempt to stop excess motion. The basic motor patterns are frequently present. There may be a deficiency in the patterns which is usually learned by trial and error because the child finds experimentation difficult. The child may become discouraged and stop attempting movements. He may develop such abnormal patterns that some muscles become abnormally strong and others weak from disuse.

Occupational therapy attacks the problem in three different ways. It presents a psychological stimulus, interesting the child in his own improvement; it provides exercises for strengthening weakened muscles; it teaches the child self help and expression within his capacity.

Training of the athetoid is based on the principle that coordinated movement can be accomplished only for the relaxed state. The child is taught conscious relaxation followed by coordinated movement. He learns the principles in physical therapy and puts them into practice in occupational therapy. It is necessary, therefore, that these two be closely coordinated in the over-all treatment plan for the patient. In consultation with the physiatrist, the occupational therapist learns which part of the treatment she is to cover and how it fits into the entire plan for the patient.

One of the most satisfactory ways to produce psychological stimulation is through a pre-school group socialization program. At the Cleveland Rehabilitation Center the children are divided into two groups, depending on the severity of their handicaps. Here the child sees other similarly handicapped children making an attempt to do what is asked. Here, away from his parents frequently for the first time, he has companions of his own age and learns to get along with the other children while at the same time he is learning from them. Such a program, supplemented by special individual work of the occupational therapist with

games and toys designed to stimulate a desire to participate, is the first step in treatment of the pre-school athetoid.

In planning the training of the athetoid child, all daily activities must be broken down into their component parts according to joint motions. Thus the therapist can determine which part of the total pattern is preventing the child from normal completion of the activity. In feeding training, for example, the therapist may observe poor shoulder control. Even a fairly good hand is of little use when the shoulder is so poorly coordinated that the hand cannot be placed where it will be used to advantage. In such a case the therapist devises some activity requiring gross motion of the shoulder for the purpose of teaching control. Whenever possible the training is started proximally. Actual feeding training with food is usually begun with the child seated before a mirror and at a table which is cut out to permit support of the elbows. Equipment may be adapted in a number of ways, for example with handles of spoons bent or built up. The aim in any adaptation is to use the special equipment only until the patient can progress to equipment less modified from normal. The same sort of plan and technics are used by the occupational therapist to teach drinking and dressing.

As soon as the child is ready for school he must be taught some method of expressing himself on paper. This may be of first importance in children with language defects. The selection of writing or typing will depend in part on the degree of involvement. Motor handicaps and mental handicaps must be distinguished. Complete disorganization of motor control may be present in a child with normal intelligence. In very severe cases, if one-finger typing can be taught with special equipment, the child may be accepted for school. In less involved cases such training may enable the child to make better progress when he is admitted to school.

Graphs are frequently used to record progress during training. They serve a dual purpose: (1) they give the physician the quantitative information he desires in a concise form, and (2) they provide incentive for the patient. Graphs for these children are set up so that progress is represented by an ascending line.

Throughout the time that the patient is receiving occupational therapy for his physical condition he is also receiving a more subtle phase of treatment in incidental encouragement or suggestion.

We realize that complete recovery of athetoid children can never be expected. Our problem during treatment is to help the patient make an adjustment to his handicap. He must realize that there are many things that he can do well and many things that are not within the physical limitations imposed by his disability. By careful selection of activity and by substitution of things which he can do well for those in which

he cannot compete, occupational therapy lays the groundwork for more satisfactory vocational adjustment at a later date.

Occupational therapy of this type must be carefully planned and coordinated with physical therapy and speech therapy. Treatment, either by the occupational therapist or at home with frequent check-ups by the physician and therapist, must be continued for a number of years. Providing there is normal or nearly normal intelligence and there is cooperation from the home, the child with minimal to moderately severe handicaps may be expected to show progressive objective improvement during the period of growth. By progressing from simple tasks, such as feeding, drinking, and dressing, to self expression and vocational training the otherwise useless individual may be able to make his contribution to society.

Bibliography

1. Carlson, E. R.: Educational and vocational aspects of the problem of the cerebral palsied. *J. Rehabil.* 12:24. 1946.
2. Martin, E. F.: Occupational therapy treatment for cerebral palsies at Children's Rehabilitation Institute. *Occup. Therapy* 19:331-338 (Oct.) 1940.
3. Phelps, W. M.: Differential characteristics of spasticity and athetosis in relation to therapeutic measures. *New York State J. Med.* 41:1827-1831 (Sept. 15) 1941.

PULMONARY MANIFESTATIONS OF BRUCELLOSIS

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Pulmonary brucellosis has received scant attention, although it has long been known that all three types of brucellosis may attack any body tissue. As early as 1861, in discussing Malta fever, Marston¹ wrote: "There is no fever so irregular in its course and symptoms." Craig² in 1906 said: "It is extremely difficult to describe accurately all the forms which this truly protean disease may assume." The largest number of autopsies in brucellosis have been reported by Hughes.³ He frequently noted pleural adhesions, pleural effusion, and patchy or lobular consolidation. Others have more recently reported pulmonary involvement. Bogart⁴ described massive bronchopneumonic infiltration due to both acute and chronic inflammation. Beatty⁵ thinks the most common pulmonary manifestation is hilar and bronchovascular infiltration and reported 12 patients showing this finding. Hemoptysis with tracheal ulceration,^{5,6} infiltration and consolidation,^{6,7,8,9,10,11,12} unresolved pneumonia,⁶ lung abscess,⁹ and pleural effusion⁹ have been recorded by others. Hardy⁹ once recovered the *Brucella* from pleural fluid by guinea