

FORTY CASES TREATED AT THE ALLENDALDE CURATIVE WORKSHOP

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REHABILITATION needs serious attention at present. An account of the first year of work at the Allendale Curative Workshop, opened at Clifton, Bristol, in 1939, is therefore of interest.

The premises consisted of a former hotel with large ground-floor rooms and nearly an acre of garden. Work had to be experimental, and each patient was made a special study. Among the personnel was Miss Mary Macdonald, member of the Association of Occupational Therapists, and head of the Dorset House School of Occupational Therapy. She had then lately returned from a tour of orthopædic hospital occupational therapy departments in America, having been given a research grant for this purpose by the Pilgrim Trust. Dr. Eugen Weissenberg, formerly in charge of the physiotherapy department at the university clinic, Vienna, joined us as a student. Miss K. Barber, another member of the A.O.T., and now in charge of occupational therapy at a Naval hospital, was also with us, and we had an enthusiastic teacher in Mr. R. C. Cole, who was an excellent joiner. Students of the Dorset House school engaged in their clinical practice with patients.

Weaving and light crafts were carried on in a room which measured about 19 ft. by 17 ft. and allowed space for 10 patients. Slightly heavier work, such as block printing and basket-making, was undertaken in a room (20 ft. by 15 ft.) which provided space for 9 patients. More strenuous work, such as joinery and metal work, was carried on in a long room (42 ft. by 15 ft.) where benches, a lathe, and bicycle and treadle saws were provided; some embossing presses which had been given to us were also in this room. The old dining-room (30 ft. by 20 ft.) was provided with a billiard table, and the conservatory gave room for darts.

The first 40 cases show what useful work can be accomplished. They came chiefly from fracture clinics at the hospitals, and were chosen by their surgeons because of some complication calling for special attention—joints fixed by adhesions, or bad habits of posture. No patient was taken without prescription and full instructions from his doctor; in the case of patients from the fracture clinic, the occupational therapist in charge attended regularly at the clinic when the orthopædic surgeon was re-examining the patient, and heard his fresh instructions. A report from the hospital almoner was also received on each case sent up.

Treatment was given in the mornings only, but the whole day should be occupied if possible before the patient is discharged back to work.

CASE-HISTORIES

CASE 1.—A woman of 23 with arthrodesis of tuberculous hip. After operation she had developed a functional disease of the knee-joint. She was lacking in self-confidence and was too conscious of her disability. Her inability to sit at an ordinary table seemed the chief cause of her unhappiness and also her inability to return to her work as a shorthand-typist. She was taught to weave on a small loom with hand controls in order to interest her in the subject without referring to her leg. She was then promoted to a foot-power loom in which the warp was raised or lowered by flexing the knee-joint. While using the hand-loom she had become so keen on the texture and pattern of the material she was weaving that she was glad to perform the necessary movements, and was soon able to realise that her knee was quite capable of being bent to a more æsthetic posture. Her gait improved at the same time. She asked to stay on for a few weeks to finish the length of material she was weaving and then returned to her office work.

CASE 2.—A man of 53, suffering from the after-effects of acute infective polyneuritis. He had been completely paralysed for several months but had recovered sufficiently to walk, and by several trick movements he could feed himself. Treatment began with weaving a rug on a frame threaded with a warp of string. The patient's deltoid and exterior muscles were weak and could not bear the weight of his arms so his arms and hands were slung in canvas loops from brackets extended from the top of the frame. He had a spasmodic contraction of the shoulder muscles which relaxed when his arms were suspended. Improvement became evident in the first few days, since the patient enjoyed the work. The next stage was to support the wrists only on an adjustable slat placed across the frame, again leaving the fingers free to weave and to push the threads into place, thus getting active extension of the fingers and wrists. As the muscles improved in tone and strength, new crafts were prescribed, such as knotting dog leads, stool-seating and woodwork. The dart-board for a few minutes each day helped in the cure.

CASE 3.—A man, aged 61, who had had a compound fracture of the radius from a conveyor-belt accident. His shoulder had been strained, and he had arthritis of shoulder, elbow and wrist with much residual disability of shoulder, arm and forearm. Mental depression was pronounced. Treatment was first given in the form of easy weaving on small hand-loom; at this time the therapist was making friends with the patient and gaining his confidence. Later he made a warp on the "mill," encouraged by the knowledge that the warp was needed for another patient's work. An occupation had to be chosen that could be carried out at a level which gave easy abduction of the upper arm to begin with; this was increased

gradually by raising the height of the mill without the patient noticing that he was doing more. As soon as he realised that his angle of abduction had increased his confidence was aroused and he then willingly coöperated in carrying out the changes in his work that increased the effort needed. His recovery was completed by getting him to sand-paper and paint screens raised to a level above his shoulder and to drill holes in a solitaire board, which exercised flexion and extension of wrist. Finally he did weaving on a large foot-loom which enabled him to get larger movements; easy supination was achieved by throwing and catching the shuttle.

CASE 4.—A left-handed man with compound fracture of left proximal phalanx of ring finger and simple fracture of little finger. Even passive extension of these fingers was impossible. Treatment was by joinery, which was his hobby; first he did planing with fingers extended as far as possible on the plane, and then sawing and generalised movement, with various tools, to ensure complete movement and suppleness. The patient was entirely coöperative and the fingers became almost normal.

DISCUSSION

These cases bring out the importance of the muscular spasm which often develops before treatment is begun. Without occupational therapy this is difficult to overcome because the patient has allowed the wrong posture to become a habit. Occupational therapy replaces in the patient's mind the image of a limb that he cannot use by one of a piece of work which that limb is accomplishing. Much depends on the atmosphere into which the new patient is introduced. Allendale was essentially a happy place where people felt they would get well. Each patient was welcomed and made to feel that his difficulties and disabilities were understood. His primitive impulses to investigate new surroundings, to show what he could perform, and to join in the activities of a group, all had to be stimulated; and when the appropriate emotion had been aroused the impulse was directed at once into an activity that helped his recovery. His fear and suspicion had to be circumvented. It usually took a few days to start a patient off well; many grasped the idea of what was intended in the first few minutes and became real enthusiasts in helping newcomers, but others needed much care to begin with; but once they realised that a change had begun in the injured limb, their coöperation could be relied upon. Special apparatus, designed by Dr. Weissenberg, was available to measure the angle of movement, and the patient could thus see from an actual graph what improvement he had made.

Experience has taught the following rules:

1. The craft chosen must provide the exact muscle movement needed at each stage. It must be changed as the patient changes.

2. The occupational therapist must superintend the movements continually; she must, therefore, have a complete training in anatomy and physiology, such as is required for massage.

3. The patient's mind must be concentrated on the accomplishment of the work on which he is engaged. Therefore it must be something that he enjoys doing and knows to be useful.

4. The degree of strenuousness must be carefully regulated. Premature use of heavy tools can only do harm; and to continue light work too long may produce a dilettante habit, and delay a man's return to his own work. The equipment must, therefore, include apparatus for heavy sawing and hammering. Work should be increased until the patient is doing a full day's activity, which can include digging in the garden and pre-vocational work. Games are a valuable adjunct. A patient who thought he could not play billiards was seen to be acting as marker to the players; he walked round and lifted his arm to mark, unconsciously exceeding what he believed to be his capacity.

Fear of infringing the rules of insurance companies had to be overcome. Some patients thought that treatment might be counted as "work" and that it would reduce their compensation; this doubt was best removed by the surgeon in charge of the case. Only one man expressed fear of his trade union objecting, and asked "what the pay would be" for his work.

The cost is important. Only one of the first 40 cases was paid for by an insurance company. Nearly all were compensation cases and the money was just enough for the man to live on; most could not even afford their fares to the curative workshop. A small part of the cost has been covered by the Dorset House School of Occupational Therapy. It is hoped that in time insurance companies will realise that occupational therapy lessens and shortens disability and therefore reduces cost. Insurance companies in America pay for such treatment and even run their own rehabilitation centres for the injured workpeople whom they are compensating, because they know it pays them to do so. Insurance companies in England already pay for medical treatment, nursing and massage, and might well make wise expenditure on this great aid to recovery.

We have had to depend entirely on voluntary attendance, and it is difficult to ensure that the patient can be convinced in the first or second visit that it is worth while to persevere with treatment, perhaps at some considerable expense of energy and of money for fares. Those who are intelligent enough to grasp at once the principle involved become enthusiastic quickly and help newcomers to settle in. But while numbers are small those nearing recovery are few; and those who have recovered have gone. Definite instructions from the

insurance companies paying compensation would help, at this stage, to ensure regular attendance and consequent success.

The injuries and disabilities treated included: fractures of humerus, radius and ulna, wrist, metacarpals, phalanges, scaphoid, os calcis and cervical spine; arthritis, arthrodesis and ankylosis of joints associated with such fractures; dislocation of the elbow; valgus deformity of the feet; chronic strains; pareses of musculospinal, median, ulnar and circumflex nerves; cerebral palsy; laceration of muscles and severed tendons after repair; limitation of movement after osteomyelitis of the carpus; tuberculous osteitis of hip and spine; acute infective polyneuritis; post-encephalitis; and traumatic neurosis. Results are summarised in the following table.

LENGTH OF TREATMENT AND ITS RESULTS IN 40 PATIENTS
(32 MEN, 8 WOMEN) OF VARIOUS AGES

Age (years)	Cases	No. of treatments	Cases	Length of treatment (months)	Cases
10-19	2	Less than 5	6	1	9
20-29	5	5-9	7	2	15
30-39	4	10-19	9	3	4
40-49	5	20-29	6	4	4
50-59	10	30-39	5	5	1
60-69	8	40-49	3	6	2
70-79	1	50-59	4	7	1
Not given	5			8	1
				9	1
				Attended only once	3

Cured or much improved	..	..	25 cases
Slightly improved	..	..	7 "
Not improved	..	..	5 "
Only attended once	..	..	3 "
Total	..	..	40

At the beginning of the war arrangements were made for the workshop to undertake treatment under the E.M.S.; but enemy action having made it inadvisable for patients to remain in Bristol the workshop was transferred elsewhere. Bristol patients are treated at Winford Hospital under Miss G. E. Barnes and Mr. R. C. Cole in the wards and in a special occupational therapy hut. The Dorset House School of Occupational Therapy has now been transferred to Barnsley Hall Emergency Hospital, Bromsgrove, where it is fortunate in being under the direction of Dr. Andrew Shepherd, the medical superintendent, who has paid special attention to occupational therapy in his hospital for many years. Active rehabilitation work is again in progress there, and with the backing of the Ministry of Health will be on a much larger scale than was possible at Allendale.

SUMMARY

A report is given on the first 40 cases treated at the Allendale Curative Workshop, attached to the Dorset House School of Occupational Therapy, Clifton, Bristol; 4 cases are described fully.

The cost of rehabilitating patients by occupational therapy might well be borne by insurance companies, as it is in America; this would allow of extension of this valuable form of treatment.

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