providing as they do an essential link in the facilities which should be available to the disabled.

REHABILITATION IN MEDICAL DISORDERS

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This afternoon I am putting to you the difficult problem of the rehabilitation of medical cases. Dr Sommerville said that about 42 per cent of the patients attending his centre were suffering from medical disorders. The main difficulty in the rehabilitation of these conditions is that they are unstable in that they are subject to exacerbations and remissions or progressive deterioration which may be rapid in some cases and slow in others. Thus we are fighting a losing battle in the rehabilitation of these people because it is likely that they will return sooner or later with an exacerbation or further deterioration and we have to start all over again. This may be repeated and each time we achieve less than before.

These disorders include chronic bronchitis, multiple sclerosis, coronary and cerebral thrombosis, degenerative and rheumatoid arthritis. In the early stages it is usually possible to achieve full rehabilitation but as disability increases patients may require surgical appliances or aids to toilet, dressing, feeding and movement such as a second hand-rail on the stairs or an invalid motor tricycle to get to work.

Employment

Some patients will have to change their work sooner or later and when this should be advised is one of the most difficult clinical decisions that a doctor has to take. Whether to advise a man to change his job in good time or to carry on depends on the type of work and the nature of the disability. For instance, people with rheumatoid arthritis working in heavy industries may not be able to carry on for long, whereas office workers with similar lesions might be able to do so.

Two common conditions illustrate the difficulties the clinician faces in advising his patients. The chronic bronchitic can carry on

with his job for a long time even in quite heavy industry and it will probably not be until the middle forties or later that he is finally forced to give up his job because he is subject to recurrent attacks, each necessitating longer periods off work, or he may be late at work because of the time it takes to clear his chest in the morning or the physical effort may become too much as the strain on the heart increases. So the time comes when he is no longer employable in competitive industry, but when a skilled man of 45 to 50 has to change his job it is too late for vocational training and the alternative is much less skilled work. Thus the clinician has to decide whether to anticipate this situation and advise chronic bronchitics to change their job some years before they are forced to do so, but whilst they are still young enough to be trained for more suitable skilled work and thereby increase their prospects of maintaining their standard of living and working for a greater number of years in the long run.

A patient with rheumatoid arthritis whose job involves sustained work with the hands, much walking or climbing stairs poses the problem of whether to advise a change of work early in the disease with a view to reducing the strain on the inflamed joints or whether to wait to see how the patient responds to treatment and, if so, for how long. This is another difficult decision to take because we know that rheumatoid arthritis may remit early in the disease and not relapse, that about a third of patients with rheumatoid arthritis never see a doctor and only a minority develop severe deformity. At the same time, we know that general rest together with local rest for the affected joints is still the most effective treatment and that work involving physical or mental strain is detrimental.

In the early stages of rheumatoid arthritis we are probably justified in adopting an expectant attitude in the hope of an early remission but we must not wait until irreparable damage has been done to joints before advising a period of rest followed by a change of employment when necessary. As a practical expedient, a temporary change to sedentary work for six to twelve months is well worth considering, even though it involves lower wages, as it will often facilitate early remission and enable the patient to return to his former skilled work in due course.

Whilst the primary objective of industrial rehabilitation is to help disabled patients to remain in or return to employment in open industry, it has been recognized that a small proportion cannot hold their own alongside the able-bodied in competitive industry and require the sheltered workshops established by voluntary societies or the national Remploy organization. It has also been recognized that a substantial number of patients are too disabled

even for sheltered workshops and for them the local welfare authorities have established day centres to provide pastime occupation to offset loneliness and boredom at home. However, patients have to be fairly fit and not too disabled to obtain one of the infrequent vacancies in a Remploy factory whilst, owing to pressure of numbers and shortage of accommodation, the day occupation centres can seldom accept patients for more than one or two days a week.

Thus, the still unsolved problem before us is to know what to do with middle-aged medical cases such as chronic bronchitis, hemiplegia, coronary disease or multiple sclerosis who have reached the stage of no longer being able to hold their own in open or sheltered industry but are still capable of useful productive work and too good to be relegated to day occupation centres for pastime occupation of the handicraft type once or twice a week.

My own experience in the occupational therapy department at King's College Hospital is that these people are good for about two-thirds of a normal day's productive work. Thus, the chronic bronchitic who is no longer able to get to work by 8 o'clock in the morning or the hemiplegic who cannot manage public transport in the rush hour will turn up in my department punctually at 10 a.m. and work steadily through until 4 o'clock on useful productive work. In my experience, chronic bronchitics who cannot keep a job in open or sheltered industry because of bad time keeping or frequent periods away from work will turn up punctually at the hospital workshop and go through the winter without losing time or, if they do contract a cold or influenza, will apologise if they have to be away for as long as a week or ten days.

After the first world war, Sir Pendrell Varrier Jones saw in tuberculosis a challenge to provide work within the capacity of patients whose disease had become quiescent after a long period of treatment in a sanatorium. He conceived the need for patients to live within easy access to their work, for the work to be suitable and the hours graduated according to their physical capacity. He knew that if his patients returned to full working hours, including living and travelling under crowded conditions, they were liable to a recrudescence of their disease. So he conceived the idea of the Papworth Village Settlement where they could live close to their work in healthy conditions and where they could engage in ordinary productive work starting with as little as three hours a day and increasing according to the tolerance of individual patients.

Fortunately, advances in preventive medicine and antibiotics have nearly overcome the problem of tuberculosis. At this moment there are so few phthisical subjects needing sheltered living and working conditions that Papworth is changing over to taking in

physically handicapped patients and is learning what a difference there is between the working capacity of the tuberculous patient with a normal brain and hands whose hours of work are limited and the physically handicapped such as the hemiplegic patient who may have lost the use of the dominant hand and suffered some reduction of mental capacity but is nevertheless capable of working a full day.

The hemiplegic housewife can be taught to run her home and do much of her housework in spite of a useless hand but when the craftsman or business executive suffers a stroke in the fifties it is difficult and usually impossible to get him back into his former work, yet he is still capable of useful productive work under sheltered conditions, especially with the aid of jigs to replace the paralysed hand. Inevitably the financial return for the work he is able to do is much lower than his former earnings, but to have nothing to do is disastrous. In my experience, if these people have the will and have a reasonably good medical prognosis they are far happier working even for a small financial return and prefer this to the frustration and boredom of idleness at home.

As I see it, one of the great needs of the moment is to bridge the gap between the Remploy factories and the day occupation centres of the local welfare authorities. We need suitably equipped workshops in which these chronic medical cases can engage in useful productive work within the limits of their capacity five days a week. Many will require transport between their homes and the workshops and this should be provided.

Social problems

In the early stages of the chronic and progressive medical disorders patients may need some help at home in the form of aids to toilet, dressing, feeding and moving about, and this will enable them to remain independent, or mainly independent, of the help of their relatives. In the later stages patients may be unable to look after themselves and their relatives may need the supporting services of home helps, home nursing, welfare aids and so on. Patients whose relatives cannot look after them and those who have no relatives will need institutional care.

Here we come up against one of the major frustrations in attempting rehabilitation. We know that occupational therapists and physiotherapists can train even severely disabled patients to be independent, or largely independent, of help so that with the supporting social services which are available in the home, patients who used to be thought to be in need of institutional care can now be looked after at home. Even with a daily visit from a district nurse and a home help, the cost is low compared with institutional care.

Why does it cost more per head to look after patients in an institution than individual patients in their own home? In recent years I have been concerned with starting a new Cheshire Home and we have decided to see if we could train patients to be as independent of help of the attendants in the Cheshire Home as we knew they would be of their relatives in their own homes. We have had only limited success and I think the reason is that if patients have been taught to fend for themselves they will do so at home to ease the burden on their relatives. It may take patients a long time to do things for themselves but in their own home they can take their time and, if their relatives have been properly instructed, they will let them do so, whilst in an institution the staff are not prepared to stand by, give the little bit of help that may be needed, and let the patients take their time doing the rest.

The attitude of the great majority of nurses, nursing aides and orderlies is that they have not time to stand by because the work of toilet, dressing, feeding and so on has to be completed within prescribed hours of duty and it is much quicker to attend to patients than to encourage them to attend to themselves. Thus we find that training in personal independence which is useful in the home is often wasted when the patient has to go into an institution. Another factor in the relatively high cost of institutional care is that nursing and other attendants have to be on duty throughout 24 hours in eight hour shifts, whereas relatives are neither paid nor have set hours on duty.

The object lesson in all this is that with modern rehabilitation techniques a higher proportion of severely disabled patients can be looked after in their own homes than in former times. Patients are, of course, happier at home and it costs less than institutional care.

In the rehabilitation of surgical cases with a stable disability such as the loss of a limb it is possible to reach finality, that is to say, once the patient has been fitted with a prosthesis and taught to use it he can be handed over to the welfare and employment authorities for training and placement in suitable employment and for the supply of any necessary aids to movement in the home such as wheel chairs and ramps or motor tricycles to get to work. With the chronic progressive medical disorders, on the other hand, rehabilitation can seldom be finalized so that the doctor's job is never finished. Patients need continuous medical supervision and further help as their conditions fluctuate or deteriorate.

I think the tendency for specialists in hospitals and medical rehabilitation centres to follow up patients is a mistake. The person

who should maintain continuity of medical supervison is the family doctor but he must know what specialized facilities are available so that when his patients need further help he knows where to get it.

DISCUSSION

Question: Has Dr Cooksey's pessimistic approach to chronic bronchitis been modified at all by the antibiotics? Does he regard the prognosis as still so bad?

Dr Cooksey: No, it is because of the long-term antibiotics that you can rehabilitate them and get them back to work. Ten years ago, when we were forced to accept recurrent absences of six to eight weeks once or twice a winter, it was extremely difficult. The point I was trying to make is that, even with the antibiotics, there comes a time when the patient is so dyspnoeic and has so much spit to get up in the morning that he cannot be at work by eight. The plea that I was trying to make was for a two-thirds day rather than a full day; the patient still needs two hours' spitting time in spite of the antibiotics.

Chairman: It has struck me that nowadays we see more of these chronic bronchitic and emphysematous cases than we did twenty-odd years ago, and this rather puzzles me. I think the reason is the very success of the pharmaceutical industry in providing us with effective drugs for dealing with pneumonia. In the 1930s up to half our middle-aged men with pneumonia died. Nowadays, these people survive into their fifties and sixties, and I think that these are the people who are providing a lot of the problems of chronic bronchitis and emphysema now. Indeed, we have altered the balance, and these people are living into a different age group and are now subject to other diseases.

Dr Cooksey: I entirely agree with you. You have put what I was trying to put much more clearly. It is the advances in clinical medicine which enable these people to survive, but they survive substantially disabled; their work capacity is reduced, and we have not provided the working conditions suitable for them. We still expect them either to turn up to a Remploy factory at eight or to go to a day occupation centre to do a bit of basket work or something two afternoons a week. What I did not do was to suggest how I