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THE TREATMENT AND REHABILITATION OF TRAUMATIC PARAPLEGIC PATIENTS IN SOUTH AFRICA

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There is a growing number of accidents causing paraplegia of traumatic origin in the population of South Africa. While nearly all the survivors are hidden away in the chronic wards of hospitals or left to carry on with the help of relatives, the problem of their eventual disposal or return to community life has not as yet been sufficiently recognized, nor has any serious attempt been made to overcome it.

The most frequent causes of spinal cord damage are: (1) motor vehicle accidents, (2) stabbings and occasional gun-shot wounds, and (3) diving accidents.

As will readily be appreciated, the number of these accidents is increasing and at the same time treatment of acute cases of traumatic paraplegia is improving. This means that while the immediate mortality continues to fall there is a considerable yearly increment of severely handicapped and, for the most part, bed-ridden patients.

In countries where there is a shortage of labour or where a serious effort is made to integrate the physically handicapped person into industry, rehabilitation and vocational training has reached heights not considered possible 25 years ago. The effect of these efforts has been to diminish the drain on the finances of the State which would otherwise have to provide for the care and maintenance of these patients in hospital and their families at home. These patients have been transformed in many cases into wage earners able to keep themselves and their families without, or with minimal, recourse to state aid. In addition, and in a much more important degree, it has removed them from the category of potential recipients of charity to a degree of self-respect compatible with living and taking part in the life of a normal community.

In South Africa the problem is different — as with most problems. First, there is no shortage of labour, particularly in the unskilled or semi-skilled categories. Secondly, since it inevitably happens that a large proportion of the patients are non-Europeans, custom and job reservation precludes their employment in occupations normally carried out by Europeans. They are traditionally confined in most cases to labouring and heavy manual jobs, which are often quite impossible to consider once they are afflicted by such a severe degree of disablement as traumatic paraplegia. Thirdly, training for return to suitable employment, if such were possible, does not exist in any serious sense and pleas for consideration of this problem have so far gone unanswered.

TREATMENT

Early Treatment of Traumatic Paraplegia

The correct initial treatment of traumatic paraplegia is difficult and involved. It is not enough that the patient is admitted to hospital and that, after a cursory examination, X-ray photographs are taken of his back or neck and a diagnosis made.

The provision of a bed in hospital is obviously essential but, in addition, it should be recognized that the nursing of these patients takes considerable experience and is more time- and labour-consuming than that of probably any other kind of patient.

Ignoring for the moment any appliance that it may be found necessary to use in treatment, it is essential to realize that these patients must be *turned every 2 hours in the day and the night*. There is no other remedy if bed-sores are to be avoided. Bed-sores are not an inevitable sequel to paraplegia and their cause can only be laid at one door — inadequate nursing. It is obvious that in order to turn a completely paralysed patient, 2 or even 3 pairs of hands, particularly if they belong to the 'frailer sex', cannot be sufficient for a heavy full-grown man without a great deal of unnecessary pulling and pushing; thereby possibly causing considerable further damage. The night staff of a busy general ward, whose duties, besides holding a watching brief on all the patients in their care, involve temperature taking, the provision of liquid refreshment, and the provision and disposal of sanitary appliances, cannot under any circumstances be expected to carry out this form of treatment. It is essential, however, to carry out 2-hourly turning in order to prevent bed-sores.

It is obvious that in a case of traumatic paraplegia there must be special considerations in nursing and it must be obligatory for matrons and superintendents to recognize that it is their responsibility to provide adequate and sufficiently skilled nursing for these cases.

It may be argued that most of the general hospitals of the Union do not possess adequate staff to deal with this problem, and certainly the occasional admission of a case of traumatic paraplegia does not warrant the provision of a special team standing by in each hospital to await such an eventuality. It is clear that the obvious solution to this problem is for a special paraplegic centre to be formed in each of the larger areas, in which this basic treatment can be carried out, economically and efficiently, without disorganizing the running of the ordinary general hospital.

In Baragwanath Hospital, under a very keen and able group of neurosurgeons, such an organization exists for the treatment of African patients. In a 40-bedded ward of acute traumatic paraplegia cases, the staff consists of one sister, two staff-nurses and nine orderlies. The cases

are admitted early — within a few hours — to this unit and, because of adequate nursing, bed-sores are certainly very rare if not unknown. Undoubtedly the provision of an adequate staff of male orderlies experienced in the treating of paraplegic cases is essential, if the patients, of whom at least 90% are male, are to be properly treated. Because of the distances involved, more centres, not confined to the treatment of Africans, are necessary if the Union is to cope with this problem. In addition it will be necessary for all medical officers in charge of units dealing with traumatic cases to realize that paraplegic patients should be transferred to such special units as soon as possible, so that they might enjoy adequate nursing from the earliest date.

Treatment of the Fractured and Damaged Cord

It is not the intention of this article to discuss the pros and cons of the advisability of the reduction of a fracture or fracture-dislocation during the first few hours following the onset of traumatic paraplegia. It is, however, necessary to state that in most cases damage to the cord has already taken place and the anatomical replacement of a fracture or a fracture-dislocation rarely influences the survival rate, except for the worse if it is hurriedly or fiercely achieved. A perfect X-ray result is of academic interest only to the surgeon and cannot often be of advantage to the patient, except possibly pinned to his identification card or passport to the next world.

Traction to the neck helps in most cases. It should be applied with moderation and is used in the initial stage to provide immobilization and to prevent further damage to a contused or battered cord. The method of traction may vary from the Glisson sling to skeletal traction by means of tongs. Anyone who has had to wear the sling for even a few hours will adequately describe its inhumanity; the kindly surgeon will turn to the use of skeletal traction.

Early Treatment of the Bladder

In 'ancient times' (not so very long ago) the general surgeons who treated retention of urine following cord damage believed that the answer to this problem was tidal drainage often followed by suprapubic drainage. The modern view, however, is strongly opposed to both these methods and in all modern paraplegic centres they have been abandoned. For the initial 3 weeks, until the degree of recovery can be estimated, intermittent catheterization is used. The argument that this method gives rise to sepsis may be discounted since, in the first place, infection is rare if the catheterization is done under normal aseptic routine, and secondly, sepsis can easily be controlled by suitable modern drugs if it does arise.

Tidal drainage, so popular 20 years ago, has been supplanted latterly by the use of suitable indwelling catheters. Likewise, suprapubic drainage has been abandoned in most centres in the treatment of paraplegic cases due to the difficulty in closing the aperture later; it is felt that this procedure further mutilates the patient who in all consciousness is handicapped severely enough by his condition.

Relief of Spasm

Once the period of spinal shock has passed, about 40% of these cases are afflicted with the distressing and painful condition of spasm. One often wonders how a patient with a transected cord can feel any pain; nevertheless, these patients are in a miserable state. They lie in bed curled up, with their knees against the fore-part of their chests, their feet in equinus, as the waves of spasm pass down their bodies.

Undoubtedly the presence of bed-sores aggravates this condition, but the major effect of this almost continuous spasm makes it impossible to turn the patient's mind to anything constructive such as reading or occupational therapy. In order to combat the spasm use is made of physiotherapy, the injection of sclerosing agents into the spinal canal and, on occasion, operations to cut the nerve roots or spinal cord.

TRAINING AND REHABILITATION

Primary Training of Paraplegics

Once the initial phase of treatment has been completed and the complications have been mastered, physiotherapy becomes the most important form of treatment. Training and development of the remaining normal muscles, particularly of the shoulder girdle and back, are undertaken in order that the patients may regain a degree of mobility by using their arms.

In addition training is started for the normal functions of life, i.e. dressing, getting in and out of a chair and, probably most important of all, management of the bladder and lower bowel.

The majority of patients move about most of the time by means of a wheel-chair but many are taught the tripod gait, using orthopaedic appliances such as the double calipers and knee braces.

Rehabilitation

It is at this stage that the idea of vocational training should be introduced. The mind of the patient should be orientated to what he is going to do with the rest of his life. In fact, it is nearly impossible to progress any further unless one is able to offer the paraplegic some goal or aim to which he might work. Often the patients — to whom the problem is most real — ask where they are going and to what end this tremendous effort is being made. It is no mean effort to walk across the room in calipers dragging a useless half or two-thirds of living but inanimate body. A patient to whom I spoke overseas compared crossing the room by means of a tripod gait with playing 6 hard sets of tennis. Interest in regaining mobility rapidly dies if there is no hope of returning to the outside world, so that unless hope of development is provided at this stage, the entire treatment of paraplegics becomes academic and useless as an effort to relieve human suffering.

The Problem in the Union

Under the law of the Union, medical treatment is the responsibility of the various Provinces, but once the treatment verges on rehabilitation or vocational training, then it becomes the responsibility of the Central Government. Where these 2 well-meaning bodies fail is that, although their spheres of interest are clearly defined for their own

purposes and particularly for financial reasons, they are most careful not to overlap in this field. In fact, so careful are they on this point that nothing in the way of rehabilitation or further training reaches the paraplegic patient. One extraordinarily subtle argument is produced which renders cooperation impossible. Apparently while a patient is in hospital 'he is undergoing medical treatment' and for this reason it is assumed that he must be discharged 'fit' from hospital before he can be rehabilitated. It is obvious that this typical bureaucratic departmentalism prevents any paraplegic from receiving rehabilitative treatment, since few can afford to go far from medical care until they are ready for burial. In fact, even if they are discharged from hospital, they must have constant inspection and supervision which necessitates repeated visits to out-patient departments or visits to the patient's home by district sisters. *Once they are paraplegics they are never medically discharged.*

This fact makes it convenient for whoever draws up the chaotic rules under which humanity suffers to draw a line over which no paraplegic is able to pass, viz. a patient must be medically discharged before he is eligible to be rehabilitated. This sorry state of affairs exists in the Union today for all sections of the community; in fact, owing to the energetic and progressive tackling of the problem in Johannesburg with regard to Africans, their lot is infinitely better than that of European or Coloured patients.

What has Rehabilitation to Offer to the Paraplegic?

Rehabilitation in the modern sense is that phase of treatment that retrains a patient to take up his original occupation or, if that is not possible as in the case of most paraplegics, trains him anew to take up a gainful occupation within his powers. Overseas many industries make it their business to take into employment handicapped persons who, to their initial surprise, have been well able to hold their own on the production line with their more fortunate fellows. Most light industries can and do find places where patients without the use of their lower limbs are able to fulfil a function and honestly and without charity earn their bread.

The effect of this enlightened outlook has many advantages. First among these is the economic effect. These patients in most cases cease to be a drain on state funds — they earn their own living and continue to contribute to the well-being of society. Secondly, there is the enormous psychological boost to the patient — he regains the self-respect so necessary if he is ever to remove himself from the dust-heap. If nothing in the way of gainful activity is offered to him, he knows and feels that he has been left to rot away what remains of his miserable existence.

What Occupations can a Paraplegic Enter?

Overseas many of the light industries have places for paraplegics. Smith's Electric Clocks is one example of a firm that employs large numbers of paraplegics. In South Africa many of our firms could take in such handicapped people if the need was pointed out to them and it was shown that these people could do a good job of work. Leather work, boot repairing, home weaving and the use of knitting machines, the use of sewing machines and many other home or factory jobs could and would be found. Training of a rehabilitative type would be necessary if such a scheme was to be a success. Placement officers of the Department of Labour would have to be orientated to this problem so that the paraplegics could be visited early in their treatment and the prospects of future employment discussed. The mere fact of such a discussion would immeasurably raise the morale of such patients.

Is the Problem Capable of Solution?

In order that something could be done for paraplegics in the Union, certain steps would have to be taken:

1. It would be necessary to establish paraplegic treatment centres at convenient places in the Union. Initially there would have to be one in the North and another in the South. The purpose of these centres would be to receive traumatic paraplegic cases as early as possible after injury and to institute correct and vigorous treatment at the earliest possible moment.

2. These paraplegic centres should have an adequate nursing staff consisting in the main of male orderlies trained to carry out their duties regarding the turning of patients in the proper manner. In addition, these orderlies should be capable of assisting the physiotherapy staff in the exercises and physical treatment.

3. There should be, in addition, a full physiotherapy staff, a large proportion of whom should be male, since the physical effort involved in training paraplegics to become mobile is heavy work.

4. The medical staff should have at least 1 full-time officer dedicated to and interested in the treatment of paraplegics. In addition, urological, neurosurgical and orthopaedic consultants who are experienced in the treatment of paraplegics would be required.

5. A good rehabilitative and vocational therapy staff with adequate apparatus at their command would be a necessary part of such a centre, together with a consulting psychiatrist to advise and help in the mental rehabilitation of the handicapped.

6. Visits from placement officers of the Department of Labour should be encouraged to orientate the patients towards future employment.

It should be noted that before such a centre is possible, a change of heart will be necessary in those in authority. They must realize that this is a real problem and that it must be tackled realistically. There is no time for pious good wishes and charity towards the handicapped and it is primarily the responsibility of those in authority to so manage their administration that the problem is adequately tackled.