

Each large and medium laminectomy self-retaining retractors.

Hudson's laminectomy sheers.

Dural set of instruments—forceps, scissors

etc.

Spinal curets.

Suction apparatus.

Bone wax.

Physiotherapy and Rehabilitation

by

Dr. A. N. S. Srivastava M.B., B.S., M.S. (ORTH.)

Lecturer in Department of Orthopaedic Surgery

I wish to draw your attention to the importance of Physiotherapy and Rehabilitation in the treatment of spinal injuries with paraplegia. We start the treatment for these patients as early as possible. Special attention is given to maintain the correct position of the limbs to avoid the development of contractures and bed sores. For this purpose the Department of Orthopaedic Surgery in this institution provides a special type of bed—the “hanging” bed. The physical treatment in early stages includes massage and passive movements of the joints to maintain their normal mobility. For effective treatment every patient needs a fairly large amount of time as the exercises should be given several times in a day. We are not able to give this treatment more than once daily to a patient as the number of our paraplegic patients remain high and there is a shortage of staff. However the nurses, in spite of being heavily over worked, take a keen interest in this work and their co-operation in the rehabilitation therapy has been invaluable.

I should mention that besides administered treatment, the patients are instructed and encouraged to do various types of exercises themselves, these are done both while in bed and, later on, when they get up. Exercises with weights and pulleys, and different appliances have proved of great value in our series of cases. As the patient improves, “balance” exercises in sitting posture, and later, in standing, are taught. Gradually we encourage the patient to walk with crutches and, later, independently. During this treatment period, every effort is

made to develop and maintain a good relationship between the patient and nursing staff. The problem can become a little difficult with irritable and un-co-operative patients.

Occupational Therapy deserves mention because of its contribution in promoting mental and physical activity.

While our patients are being given physical treatments we also keep them engaged in such occupations as toy making, weaving, knitting etc. We have found it to be extremely beneficial in stimulating a cheerful and happy frame of mind. They soon lose their ideas of being useless members of society, and thank us for helping them toward new and productive occupations.

We have now established well equipped Orthopedic Rehabilitation Unit in our Department—the only of its kind in Uttar Pradesh. We are also training our nurses in this specialized branch of work.

We are indebted to our Chief of Department, Dr. Sinha, for his encouragement and keen interest in the development of this Unit.

We have been able to achieve a good deal for our patients, and derive a lot of personal satisfaction in seeing numbers of them return to a life of useful and respected citizenship.

Continued by Staff Nurse D. Rodricks—

I should like to support what Dr. Srivastava has said as well as to mention certain specific aspects of treatment.

The patients coming to us are usually of two types :

1. Those without cord injuries.
2. Those with cord injuries.

Those patients without cord injuries are kept on a fracture bed, and after the immobilization of the part, the physical treatment is started early. Patients are not confined to bed but are allowed to get up and, after a few days, to walk. During this period spinal, arm, leg and head exercises are given. After the removal of the plaster jacket, 'resistance' exercises are increased and more vigorous exercises for trunk arm are given.

Patients with spinal injuries with cord involvement

These patients take a longer time in their recovery, and need sympathetic help to overcome the feelings of depression, resentment and despair. Cheerfulness and encouragement are necessary to obtain their full co-operation without which little can be done for them.

Where there is cord involvement, a detailed examination is made to ascertain the degree of motor and sensory nerve loss. A detailed neurogram and muscle charting is made for record and guidance.

In the early stages after injury, the maintenance of correct position is of great importance in order to avoid the development of contractures and pressure sores. Passive movements of the paralysed muscles is started early and the full range of movement and the mobility of the joint is thereby preserved. In long standing cases where the patient is admitted with muscles already contracted, special care is taken in instituting movements ; such complications as injuries to the bones, blood vessels and the nerves is to be avoided. Generally the patients

with cord injuries present themselves with either of the following :

1. Spastic Paralysis.
2. Flaccid Paralysis.

While treating the spastic limb the passive movements are given slowly, carefully and rhythmically. Handling of the limb is done very gently, a brisk or rough movement may cause a sudden spasm and may damage the tissues. Patients with marked adductor and flexor spasms are more successfully treated with the help of two persons. Particular care is taken to avoid abrupt overstretching of the muscles.

Patients with a flaccid type of paralysis have poor circulation in the limbs and show considerable degree of decalcification of bones ; here caution is needed that when carrying out the passive movements the whole limb be supported, and every care is taken to avoid sudden jerks or strain. Ankle and toe movements are important in every case to avoid plantar-flexion contractures of the feet and clawing of the toes. Friction on delicate scar tissue over the trochanters and sacrum is avoided.

Massage plays an important role in securing full and efficient circulation in the muscles, and in maintaining their nutrition. Massage is also effective in those cases with recurrent œdema of the feet and lower legs resulting from circulatory disturbances.

Lastly we would mention the value of sports in a well developed programme of rehabilitation. When the paraplegic is able to participate in such games as football, table tennis and archery, he quickly recovers his self-respect. Thus sport contributes to the physical and mental well being of the paraplegic, and helps to restore him to the community as a worthy member.

"The secret of education lies in respecting the pupil"

George Bernard Shaw