

# Paramedical Aspects of Spinal Cord Injured Patients

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## Paramedical aspects

The need for comprehensive management programmes for spinally injured people is now accepted in most countries in the world. Specialised centres are being built and the importance of a multi-disciplinary approach to supervise and administer the short and long term management of these people is no longer questioned. For the purpose of this article, the term para-medical will only include: nursing, physiotherapy, occupational therapy and social work.

Each has a special role to play, but together they form a cohesive unit that is essential to the overall management of the patient. They must complement each other and should not be involved in counter-production through lack of clear definition of roles. The social worker is clearly the only contributor without a 'hands on' role, but nevertheless has an equally responsible function.

## The present

From a medical point of view the acute management of spinal cord injuries is becoming more and more organised and successful and the longer term care of these people is the area to which we must direct most of our energies.

If it is essential to have good early management then it is equally essential to have good lifetime management i.e. present to future (Bedbrook, 1985).

A spinally damaged person will make a transition through three distinct phases of re-adjustment:

1. Acute.
2. Active rehabilitation.
3. Discharge to long-term management.

The participation of the para-medical disciplines at these stages are now discussed:

## **Acute**

### *Nursing*

- Diligent observation.
- Avoidance of all preventable complications.
- Communication to colleagues.
- Pain relief.
- Comfort and relaxation.
- Body hygiene.

### *Physiotherapy*

- Maintenance of an adequate airway.
- Initial and on-going assessments of motor and sensory states.
- Prevention of deformities.
- Early exercise.

### *Occupational therapy*

- Direction of concentration toward capabilities.
- Visual stimuli to re-inforce activities.
- Early hand activity in quadriplegic patients.

### *Social work*

- Deal with immediate practical issues.
- Alleviate unnecessary stress.
- Restore the balance between the patient and his environment.
- Identify his pre-accident lifestyle.

## **Rehabilitation**

### *Nursing*

- Specify techniques e.g. bladder and bowel training.
- Tissue trauma observation and care.
- Education of patient and relatives.
- Diet.
- Posture in bed and chair.
- Medication and equipment maintenance.
- Infection control.
- Emotional and psychological support.

### *Physiotherapy*

- Maintenance of good respiratory function.
- Passive range of movement of all joints.
- Prevention of deformity and excessive spasticity.

Frequent recording of remaining muscle strength (including neuro-intact patient).

Exercise programme sepecific to the on-going needs of the patient.

Teaching of special skills e.g. transfers, gait training, self passive movements.

Education of motor skeletal system and functions to patients and relatives.

### *Occupational therapy*

Encourage a desire for independence.

Perfect activities of daily living using splints, aids and home adapted appliances.

Re-assessment of tactile sense and discrimination.

Provision of opportunities for social interaction.

Restoration of self confidence.

Selection of activities for re-education of hand function.

Communication skills.

### *Social worker*

Maximise individuals level of competence\* and independence.

Clarify and re-evaluate life as an on-going process.

Consideration of long-term losses e.g. vocational abilities, personal relationships, accommodation, finance.

Maximise the social function of patients.

Evaluate coping mechanisms.

Encourage discussion of feelings.

Review family attitudes.

## **Discharge—long-term maintenance**

### *Nursing*

Review of patient management and treatments (in clinics or at home) with particular attention to skin areas, bladder, bowel, diet, spasticity and contracture.

Support and counselling with respect to family issues.

Assessment of need for allied professional assistance e.g. physiotherapy, social worker, vocational or home assistance.

Continued education of body functions and warning systems.

### *Physiotherapy*

Encourage maintenance of normal range of movement of all joints.

Issue on-going exercise programmes specific to individual needs.

Provide prophylactic and active chest treatments on an out patient basis.

\* competence = acquisition of behaviour adequate to meet demands of social roles.

Discourage lethargy through co-ordination of exercise and recreation programmes.

Assessment and recording of neurological progression or regression.

Instruction on ambulation and mobility.

Physical relief of pain and spasticity.

Liaison with allied professionals and institutions.

#### *Occupational therapy*

Re-assessment of functional ability.

Provision of necessary aids or splints.

Accurate assessment of residual hand function.

Recreation.

Work experience.

Changing daily activity methods to accommodate aging process.

#### *Social worker*

On-going counselling in relation to functional, physical and vocational needs.

Review welfare needs.

Referral to community and social security agencies.

Instruction on pending court cases.

Assist with integration back into respective peer groups.

### **The future**

It is not envisaged that the incidence of paraplegia and tetraplegia will lessen in the next half century, in fact with the increased incidence of trauma particularly on the roads, it is more likely to increase. In countries where patients are adequately cared for and urinary tract infection is kept to a minimum, paraplegics should expect to live a normal life span and tetraplegics normal life minus 10 years (Snedden, 1982; Griffiths 1982). We must therefore ask ourselves the question—‘does the quality of life we are giving them, make it all worthwhile?’

We should be able to answer a definite ‘yes’ to the following questions:

1. Does the patient have a complete understanding of his/her condition?
2. Is the patient skillful and highly trained in the self maintenance of their condition?
3. In the case of high tetraplegics are the care givers trained in the care that can't and shouldn't be provided by the allied spinal unit?
4. Does the patient have a good level of physical fitness combined with good personal hygiene?
5. Has the patient ‘overcome’ or learnt to live with their disability?
6. Is the patient ‘integrated’ into society?
7. Has the patient the motivation to succeed now that a normal life span is guaranteed?

Our programmes should aim to create an awareness in the disabled patient and so shift from the rehabilitation professional to the individual, the responsibility for the welfare of his own body. The world is becoming one of computers and highly mechanised technology and naturally they will have a place in the management of these people, particularly as functional electrical stimulation comes to the fore.

Spinally injured people are demanding more answers from all health professionals and hopefully our areas of clinical research will meet these demands.

Even in the light of this sophisticated technology we must remember that simple tried and proven principles may never have a substitute. Simple (although maybe repetitive) techniques that are easy to comprehend, readily available and cost effective will often be more accepted by the clients.

Passive movements for maintaining joint range, night resting splints, manual muscle charting, standing frames, intermittent relief of ischial pressure, built-up handled cutlery and 'velcro' closure on garments are tried and proven methods for confronting specific problems. They may never be superseded or replaced.

What is important is that a high standard of care with beneficial results is maintained by all disciplines. One outstanding discipline is ineffective on its own.

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