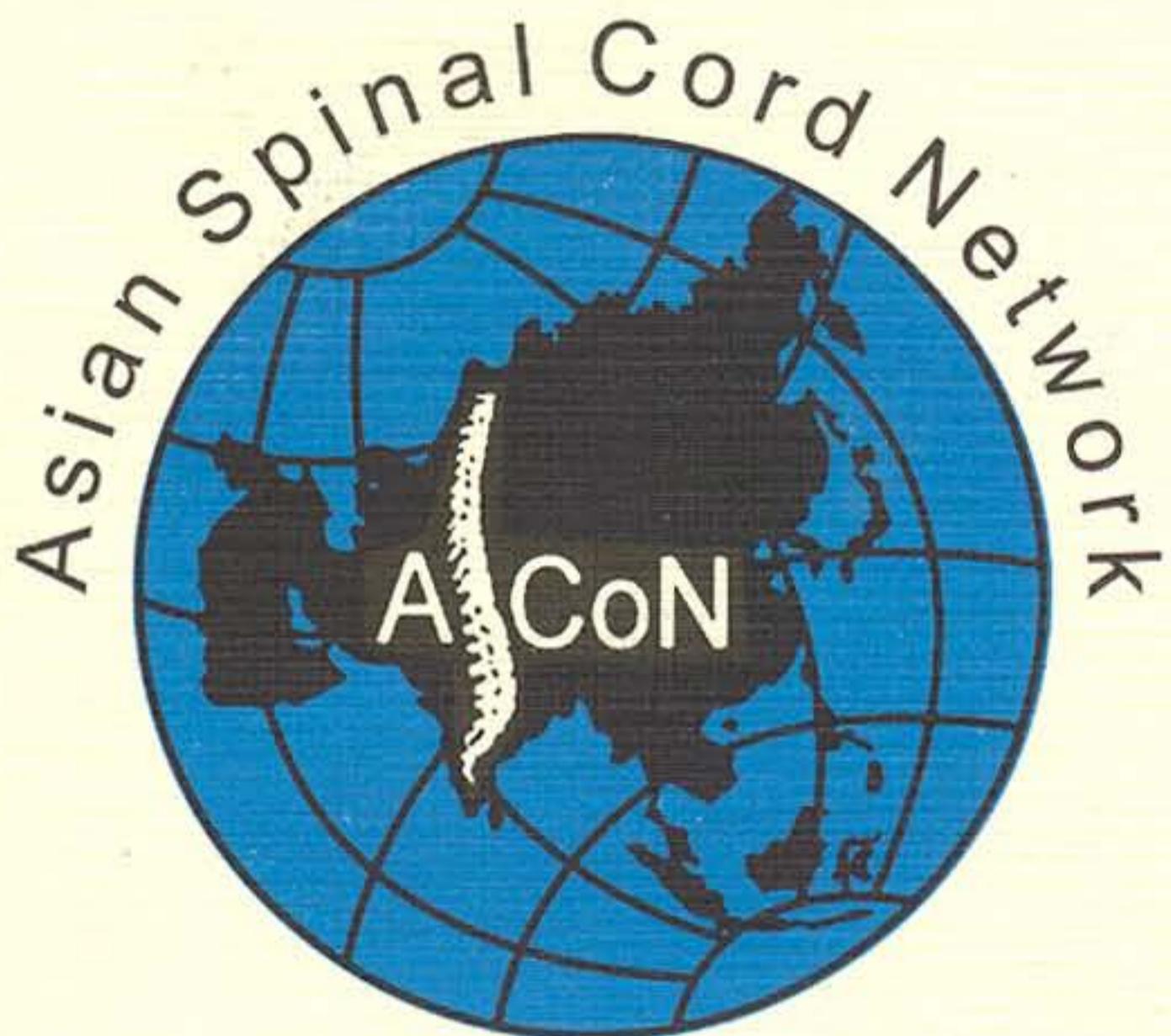


# Guiding Principles For Management of Spinal Cord Injuries



2006

GUIDING PRINCIPLES  
FOR MANAGEMENT OF  
SPINAL CORD INJURIES

ASIAN SPINAL CORD NETWORK  
(ASCoN)

2006

First Published 2006

© The Asian Spinal Cord Network (ASCoN)

*Sponsored by:*

John Grooms Overseas  
Handicap International and Ministry of  
Foreign Affairs of GD of Luxemburg

*Printed at:*

National Printing Press  
Bangalore

## TABLE OF CONTENTS

Preface .....	1
Management at Site of Accident .....	5
Acute Management .....	5
Conservative / Surgical Management .....	7
Bladder Management .....	8
Bowel Management .....	10
Associated Complications and their Management .....	10
Rehabilitation .....	12
Sexuality and Fertility Management .....	15
Psychosocial Rehabilitation .....	15
Vocational Rehabilitation .....	16
Home Modifications and Reintegration into the Community .....	17
Outcomes .....	17
Follow-up .....	18
Prevention .....	19
ASCoN – Asian Spinal Cord Network .....	20

## PREFACE

Spinal injury is perhaps one of the most devastating ailments that can afflict mankind. It was described as an "Ailment not to be treated" until the Second World War when Sir Ludwig Guttmann and Sir George Bedbrook showed that, if properly managed, such people could lead a near normal life style. Subsequently, numerous spinal injury centres were set up in developed countries. However, in developing countries spinal injury management has been given a low priority because of various factors such as poor outcomes, affliction of predominantly lower socio-economic strata of society, costs involved, requirements for appropriate infrastructure, and the requirement of a multi-disciplinary team.

In developing countries, very often, patients are provided with acute management and are then sent back home without comprehensive rehabilitation, which is vital for the management of the patient. It was felt that awareness about the importance of comprehensive rehabilitation and the minimal resources required for its provision would go a long way in developing comprehensive services for spinal injury management. It was also felt that this could be achieved by developing and circulating widely the guiding principles for spinal injury management as relevant to the local conditions.

There is a lot of literature available about spinal injury management. However, there are a lot of controversies regarding many aspects of spinal injury management and the available literature does not give clear cut guidelines. This can be confusing for professionals, especially those who are new to the field. Also, most of this literature pertains to practices as followed and applicable in developed

countries. There is a need to give clear cut guidelines for professionals based on the experiences of various experts in the Asian region.

Of late there has also been an interest amongst governmental and non-governmental organisations and professionals in developing countries to provide services for spinal injuries. Asian countries also took up the challenge and various spinal injuries centres came up in various parts of the continent in the recent past. John Grooms Overseas took the work of networking the spinal injury centres following the establishment of the Asian Spinal Cord Network (ASCoN) in 2001.

During the 4<sup>th</sup> ASCoN conference held in Kathmandu, Nepal from 8<sup>th</sup> – 10<sup>th</sup> November 2004, Dr H S Chhabra presented a White Paper on spinal injury management, which he had compiled for the Indian Orthopaedic Association with the inputs of experts from all over India. Realizing the importance of and need for developing guiding principles on spinal injury management applicable to the Asian countries, the General Body and Executive Committee of ASCoN, during the annual meeting in 2004, decided to use this paper as a draft paper for formulation of the ASCoN guiding principles. This draft paper was circulated amongst various experts of ASCoN in Afghanistan, Bangladesh, Bhutan, Cambodia, India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand and Vietnam. Based on their inputs, the ASCoN guiding principles were formulated and presented at the 5<sup>th</sup> ASCoN conference held in Vietnam from 30<sup>th</sup> November – 3<sup>rd</sup> December 2005. The Executive Committee of ASCoN formally adopted these as the ASCoN guiding principles for management of spinal cord injuries.

For the formulation of the guiding principles, measures were taken to ensure that they were comprehensive, simple, based on current expected standards of care (evidence based medicine), implementable with the resources available in the area, upgradeable from time to time with advances in management and took into consideration locally prevailing conditions.

The guiding principles summarize all aspects of spinal injury management including extrication from site, first aid, transportation, acute management, evaluation, surgical management, comprehensive rehabilitation (physical, psychosocial, sexual, and vocational rehabilitation) management and prevention of associated complications, home modification, reintegration into community, and follow up.

The guiding principles also emphasize the critical importance of Prevention programmes. It is accepted that the dictum “Prevention is better than cure” is very relevant in spinal cord injuries and hence a very strong focus should be given to this.

The guiding principles are useful for all professionals involved in spinal cord injury management including doctors, nurses, managers, physiotherapists, occupational therapists, psychologists, orthotists, social workers, peer counselors, and vocational counsellors since all of them need to have an understanding into all aspects of comprehensive management of spinal injuries. It will be particularly useful for professionals who are new to the field and for centres which have just been established or are in the process of being established. It can also assist policy makers in designing rehabilitation services and sensitize them

for implementing public awareness programmes and legislation for prevention.

It is important to understand that these guiding principles only provide an insight into the principles of each aspect of spinal injury management. ASCoN plans to work on more detailed guidelines for each aspect subsequently. Professionals are meanwhile encouraged to go through the literature available in this regard.

Queries, suggestions and constructive criticism of the information provided would be welcome and relevant information received will be used for the further refinement and improvement of these guiding principles.

**Dr. H S Chhabra**

On behalf of ASCoN Executive Committee



## GUIDING PRINCIPLES FOR MANAGEMENT OF SPINAL CORD INJURIES

Spinal Cord Injury (SCI) management requires a multi disciplinary team approach and should start with first aid at the site of accident and last until the patient is successfully integrated into the community. It should then involve a regular follow up throughout life.

### MANAGEMENT AT SITE OF ACCIDENT

Emergency medical care is very important in SCI management for saving lives and preventing additional progressive neurological trauma. At the site of accident the spinal injured person should be extricated by trained personnel after immobilizing the neck and back.

After the neck is stabilized and the patient moved to a supine position, first aid should be given like in any other trauma. High-level tetraplegics require special attention since they could have a respiratory arrest and could thus require ventilation. Evacuation to the nearest major accident and emergency centre could be done by trained personnel and the patient repeatedly assessed en-route. After the patient is stabilized he/she should be shifted to a definitive center specializing in the management of SCI.

### ACUTE MANAGEMENT

Since there is a high incidence of associated trauma and since classical signs and symptoms may be absent in these patients, they should be screened for associated trauma like orthopedic, neurosurgical, general surgical, cardiothoracic, vascular or faciomaxillary trauma.

Nasogastric aspiration should be done routinely in all tetraplegics during the acute phase since aspiration is responsible for a large number of deaths in such patients.

X-ray remains the gold standard of radiological evaluation and should be routinely done for the whole spine. CT and/or MRI is desirable.

The role of methylprednisolone in SCI patients is controversial and various studies have shown contradictory results. Three multi-centre National Acute Spinal Cord Injury Studies (NASCIS) in the USA were inconclusive. For all patients reporting within 8 hours of injury the option of using methylprednisolone could be given to the patients. The recommended dose is a bolus of 30 mg/kg body weight administered intravenously over 15 minutes followed by a constant infusion of 5.4 mg/kg/hour for 23 hours. However it should be mentioned that there is no definite conclusive evidence of a beneficial effect and that there could be some complications related to its use.

Prophylactic anticoagulant therapy is routinely used in developed countries. The incidence of Deep Vein Thrombosis (DVT) in Asian countries has been quite low. Critics however attribute this to inadequate detection. Prophylactic anticoagulant therapy should be used in all high-risk cases (elderly, obese, previous history of DVT or Pulmonary Embolism (PE), cigarette smokers, prolonged operating time.) Subcutaneous heparin (5000 U every 12 hrs), low molecular weight heparin (3500 anti Xa units once daily) or oral anticoagulant (Acenocoumarol, 8-12 mg on 1<sup>st</sup> day, 4-8 mg on 2<sup>nd</sup> day and a maintenance dose of 1-8 mg) could be used depending upon the affordability. The drug dosage should be monitored by activated partial

thromboplastin time (APTT) for heparin and low molecular weight heparin and Prothrombin time/INR for oral anticoagulants. In addition, early mobilization, twice daily full range of passive movements and external compression should be used to prevent DVT.

Respiratory management is very important, especially in tetraplegics. Regular chest physiotherapy should be done and the respiratory parameters should be monitored. The patient should be intubated and mechanical ventilation started at any of the warning signals of vital capacity <1000 ml, abnormal arterial blood gases, frequent atelectasis and consolidation on X-ray chest.

### **CONSERVATIVE / SURGICAL MANAGEMENT**

There is no clear cut consensus on the role of conservative versus surgical management of spinal cord injuries. The role of surgical decompression in neurological outcome is controversial and there have been contradicting views in various studies. There is biological evidence from experimental studies that early Decompressive Surgery may improve neurological recovery after SCI, although the relevant interventional timing in humans remains unclear. The role of surgical decompression in SCI is only supported by Class III and limited Class II evidence. Hence there is no conclusive evidence so far that surgery improves neurological outcome. The role of surgical decompression in reducing systemic complications is also not clear. Decompressive surgery for SCI can thus only be considered an option.

Disco ligamentous injuries are usually unpredictable in their healing potentials and are generally likely to benefit from surgery. In patients with impaired compliance by mental disorders, by

age or by drug addiction, conservative management is more difficult. In polytraumatised patients, surgical management is more frequently needed. Hence SCI centres should be able to offer both conservative and surgical management at all times.

There is no clear-cut consensus on the role of timing of surgery in neurological outcome. Similarly there is no clear-cut consensus on the role of timing of surgery in reducing systemic complications. Surgery should be done only after the patient is stable and other associated conditions warranting priority treatment have been dealt with.

## **BLADDER MANAGEMENT**

Improperly managed neurogenic bladder is still one of the commonest causes of morbidity and mortality. Hence bladder management plays a vital part in SCI management. Neurogenic bladder could be evaluated by simple clinical tests like voluntary anal contraction, bulbocavernosus reflex, great toe proprioception, anal reflex, and ice water test or baseline investigations like Ultrasound KUB and Urodynamics (Videourodynamics or Urodynamics with MCU).

The bladder could be managed by use of an indwelling catheter during the spinal shock phase, clean intermittent catheterisation (CIC) after spinal shock, and self-CIC at varying periods before discharge and at home. Tetraplegic and female patients require separate considerations and an indwelling supra pubic catheter may be an option. Reflex voiding is reserved for motivated patients with upper motor neuron bladder not wanting the option of CIC and with no detrusor sphincter dyssynergia or hyperreflexic detrusor. Medication

is advisable to reduce complication rates in these patients. Crede's manoeuvre can lead to upper tract changes and is not advisable.

For indwelling catheterization Foley's catheter could be used. For CIC hydrophilic coated disposable catheter is desirable whereas the reusable Foley's catheter would be most practical. However Nelaton Catheter, K-90 or Red rubber catheter (no. 5-7) could also be used. The reusable catheter is processed by autoclaving in the hospital and with soap and running water at home. A clean cotton cloth bag should be used for storage. The use of dettol, savlon or iodine for processing or storing the catheter is to be condemned. Indications for concomitant medications for Bladder Management include detrusor hyperreflexia, detrusor external sphincter dyssynergia, chronically contracted bladder, and all patients on reflex voiding.

Complications of Neurogenic bladder are lower urinary tract complications like urinary tract infection, bladder calculi, orchitis/epididymitis and urethral fistulae/false passage; upper urinary tract complications like vesicoureteral reflux, hydronephrosis, pyelocaliectasis, renal calculi, renal/peri renal infection, renal insufficiency and failure; and contracted bladder.

A life long regular urological follow-up is required. Urine routine and culture is done monthly initially and then on signs/symptoms suggestive of infection. Renal function test is done yearly or more frequently if patients are mentally unbalanced.

Urodynamics is repeated only if there are repeated infections or leakage. Ultrasound KUB is done yearly. Cystoscopy is done yearly for patients on indwelling catheter.

## BOWEL MANAGEMENT

In bowel training a fixed time pattern takes the place of cerebrally monitored urge. For most patients, a complete bowel evacuation every other day is satisfactory. This is preceded by night before laxatives or stool softeners and triggered by suppositories or rectal touch technique. Advantage is also taken of the gastro colic reflex. A good diet with sufficient bulk (fibre), adequate fluid intake and a regular exercise regime are essential for a good bowel program.

## ASSOCIATED COMPLICATIONS AND THEIR MANAGEMENT

Pulmonary complications like aspiration, atelectasis, pneumonia and ventilatory failure are the most common cause of death in developed countries, both during the acute and chronic phase. There is a significant correlation with age and with complete injury. These complications can be prevented by proper respiratory management.

Pressure ulcers occur commonly over bony prominences. The most common site is the sacrum, heels and ischium. Shear in combination with pressure is the major etiologic factor. Other factors include skin maceration due to moisture and poor nutrition. Pressure ulcers can be prevented by regular turning, skin care, avoiding shear and pressure, special beds, mattresses, pillows, cushions, and patient education. Pressure ulcers can be managed by removing pressure (lying prone or turning side to side), adequate nutrition, debridement, regular dressings (wet to dry dressings to remove residual necrotic tissue and occlusive dressings once wound is clean) and flap surgery for grade III and IV sores.

Excess spasticity interferes with activities of daily living. It may cause pain and interfere with sleep. It can be prevented by regular physiotherapy. Spasticity should initially be managed by removal of irritating stimuli below the level of lesion and regular physiotherapy. If it persists oral baclofen or other drugs could be started. If oral drugs cause drowsiness, dizziness or other side effects or if they are not effective, intrathecal baclofen pump could be implanted after an Intrathecal baclofen trial shows good results. In intractable cases local nerve blocks or destructive or ablative surgical procedures such as rhizotomy or myelotomy could be carried out.

When it occurs neuropathic pain is the single most factor responsible for lowered ratings of quality of life. Treatment is with drugs like Gabapentine, Amitryptiline and anti inflammatories. In patients who do not respond to drug therapy peripheral nerve blocks and subsequently surgical procedures producing partial or complete surgical ablation or destruction of spinal cord or nerve root tissues – myelotomy, cordotomy, surgical or percutaneous posterior rhizotomy and dorsal root entry zone procedures could be attempted.

Dorsal column stimulator or morphine pump implantation are advanced surgical procedures for pain management.

Deep Vein Thrombosis (DVT) can be detected by clinical inspection or tests like Doppler ultrasound. Treatment could be with intravenous heparin adjusted daily according to APTT or low molecular weight heparin (1.5-2mg/kg body weight) which does not require strict monitoring. Sodium warfarin could be started within a few days in the dose of 2-5 mg/day and increased gradually

depending on prothrombin time/INR. Heparin or low molecular weight heparin could be discontinued in 7-10 days when prothrombin time has reached a level 1.5 to 2.0 times the control value.

Anticoagulants are continued for 3 months for DVT without pulmonary embolism or for 6 months for DVT with pulmonary embolism.

Other complications include cardiovascular complications like autonomic dysreflexia, pulmonary embolism, myocardial infarction and cardiopulmonary arrest; neuro-musculoskeletal complications like heterotopic ossification, osteoporosis, contractures, musculoskeletal pain and post traumatic syringomyelia; gastrointestinal complications like gastrointestinal (GI) hemorrhage, paralytic ileus, constipation, hemorrhoids, abdominal distension, constipation; late GI complications like gall stone disease; and metabolic complications like immobilization hypercalcaemia or hypoproteinemia.

## **REHABILITATION**

The major goal of rehabilitation is to make the individual as independent as possible in his/her activities of daily living and to get him/her back to a near normal life style. Rehabilitation starts on day one. It requires specially trained staff and team effort. The rehabilitation team includes spinal injury consultant, nurse, physiotherapist, occupational therapist, orthotist, psychologist, peer counsellor, social worker, and vocational counselor.

Rehabilitation should be done according to the environment in which the patient has to return, for example, if the patient has to go back into a village and is rehabilitated according to an urban setting, the program is bound to fail. The goals of rehabilitation in acute care include prevention of

pressure ulcers, maintenance of joint range of motion, commencement of bowel and bladder programs, commencement of sitting program and instituting activities of daily living appropriate to medical conditions and level of injury. The rehabilitation team should plan the goals in consultation with the patient and the family and regularly monitor the achievement of goals.

The American Spinal Injury Association (ASIA) scoring system is the most commonly accepted impairment evaluation paradigm. This system classifies patients on the basis of their clinical examination. The Functional Independence Measure (FIM) and the Spinal Cord Independence Measure (SCIM) are the most widely used disability measures within rehabilitation. Both FIM and SCIM are working tools that enhance interdisciplinary cooperation within the medical team and both scales have independent measures on self care, sphincter control and mobility. The "ICF Research Branch of WHO, Collaborating Centre for the Family of International Classifications" in collaboration with International Society for Physical and Rehabilitation Medicine (ISPRM), the International Spinal Cord Society (ISCoS) and many other institutions around the world, is currently working on a project to develop ICF Core Sets for Spinal Cord Injury (SCI).

There are two independent measures within the FIM – a motor dimension including self care, sphincter control, mobility and locomotion, and a cognitive dimension including communication and social cognition.

The physiotherapist's interventions should include positioning; respiratory care (breathing exercises, postural drainage and assisted cough) functional ranges of movement, bed mobility

skills, increasing sitting tolerance and strengthening programme. As the spinal cord injured patient is mobilized, vertical mobilization should be done on a tilt table. After overcoming postural hypotension, the patient is made to stand on a standing frame and mat activities like rolling, side sitting, prone pushups and quadruped positioning are started.

The occupational therapist's interventions include balance training (static sitting balance and dynamic balance), wheelchair transfers (front, side, plinth high/low, vehicle and commode transfers), wheelchair propulsion, hand functions, ADL training, community outing, home modification and work place modification.

Splints, tendon transfer surgery and Functional Electrical Stimulation (FES) could be used for the management of tetraplegic hand.

Wheelchair clinic, use of assistive technology and educational classes for patients and care givers are important components of rehabilitation as are sexual counselling, fertility clinics, peer counselling, psychosocial counselling and sports and recreational therapy.

In the wheelchair clinic an appropriate wheelchair and cushion are prescribed to each patient. A pressure clinic evaluates this further by pressure mapping of the ischial tuberosity region and suggesting appropriate changes in the wheelchair/ cushion in order to avoid excessive pressure in this region thus reducing the chances of pressure sores.

Assistive Technology helps the patient become independent as far as possible in his/her activities of daily living. A range of products are available in this regard.

Educational classes and manuals for the patient and care giver are important since it helps them

understand the ailment, participate better in the rehabilitation process and manage any complications/problems themselves once they go back home.

### **SEXUALITY AND FERTILITY MANAGEMENT**

Sexual rehabilitation is a very important but neglected field. The importance of non-penetrative and the emotional part of sex should be emphasized. Oral sildenafil is effective for erection in the majority of patients. In those patients who do not respond to it, vacuum constriction device, surface application of nitroglycerin, intracavernous injections of papaverine and penile prosthesis are other methods for erection. In females lubricating jellies may be required. Counselling of both partners is required. The able partner could play the more active part and after adequate time, trials and privacy to both partners a normal sexual life can be achieved.

Upto 50% – 60% success rate is possible in the field of fertility for spinal cord injured patients. After ejaculation (pro or retrograde) by vibrator or electro ejaculation by trans rectal electrical stimulation, the semen is collected from urethra or bladder and artificial insemination, invitro fertilization or embryo transfer is carried out. A caesarean delivery is more common.

### **PSYCHOSOCIAL REHABILITATION**

The spinal cord injured patient tends to be more receptive to counselling by an individual who himself/herself has had a spinal injury and has since been successfully rehabilitated into a normal lifestyle. A peer counsellor is thus a very important member of the team.

The spinal cord injury has major consequences psychologically not only for the patient but also for the whole family. Hence psychosocial counselling is important for the patient as well as the whole family. Sports and recreational therapy are important not only to break the monotony of the prolonged treatment, as a form of exercise and to stimulate the creative mind of the individual but also to encourage them to incorporate these important activities in their lifestyle subsequently.

Social workers play a very important role in spinal cord injury rehabilitation. They are the intermediaries between the patient, the entire team and the community itself. Their other interventions may be for financial aid matters (government finances, pension plans, disability allowances for example), litigation matters, family issues, employment planning, home and workplace modifications and supporting students to recommence education. Through community and multi-sectoral networking the social worker is well placed to support and facilitate the integration of the person into all aspects of community life.

### **VOCATIONAL REHABILITATION**

Unless the rehabilitation process involves making the individual economically productive members of society through vocational counselling and training, the job is incomplete. This assumes importance especially since most people with spinal injuries are the sole or are otherwise breadwinners for the family and are not able to go back to the same vocation after spinal cord injury.

## HOME MODIFICATIONS AND REINTEGRATION INTO THE COMMUNITY

A pre-discharge home visit to suggest home modifications, follow up home care services to minimize any complications at inception, and to help the patient in returning to a normal life style and reintegration back into the community is important.

## OUTCOMES

Although not the exclusive determinant, functional independence is closely correlated with motor level. Patients with C2 to C4 lesions are the most profoundly injured SCI patients. They have no significant strength in any limb. Many are ventilator dependent and have long-term tracheostomies. These patients require assistance for all Activities of Daily Living (ADL). Mobility requires a powered wheelchair. As a practical matter most have an indwelling catheter. Technological advances like talking tracheotomy tube and computer driven environmental control systems can improve the quality of these patients' lives.

C5 Tetraplegic patients have some preserved biceps function. They are able to assist in their self-care activities. They require adaptive devices to feed independently. As a practical matter, they have indwelling urinary catheter. They require assistance for transfers. Mobility is with a powered wheelchair usually.

In a C6 tetraplegic the tenodesis effect increases functional independence. They may be able to achieve modified independence in dressing and bathing. Bowel care on the commode may be performed with modified independence. Males may be able to perform self-catheterization. With a sliding board, transfers may be completed without the assistance of a caregiver. A manual wheelchair may

suffice for mobility and the person may be able to drive a modified vehicle.

In C7 and C8 tetraplegics transfers should be independent. Patients should be independent in most functional tasks at a modified level. They should be able to perform self-intermittent catheterization. A manual wheelchair should suffice and some may be able to drive a modified vehicle.

As the level lowers thoracic paraplegics have more truncal stability in a wheelchair. Patients at level below T6 are not at risk for autonomic dysreflexia. They should achieve a modified independent selfcare and transfer status, as well as modified independent bowel and bladder management. Mobility is with a manual wheelchair. Most should be able to drive a modified vehicle.

Lumbar paraplegics may be able to ambulate with bilateral ankle foot orthosis (L3) or knee ankle foot orthosis (L2). However most people with L2 injuries will find a wheelchair more practical for community mobility. Individuals with neurological level above L2 may walk with hip, knee, ankle, or foot orthosis.

## **FOLLOW-UP**

A life long regular yearly follow up is mandatory. Prior to discharge, data on the patient, his/her family situation and environment should be collected when the patient is still at the rehabilitation institution. A risk assessment for each patient should be included in the discharge information and explained to the patient and his/her family accordingly. Follow-up can be complimented through regular postage of relevant literature to the patient. This can also incorporate a postal questionnaire that can be used as a way to gauge community integration and for the identification of problems. Follow up can help to detect and prevent

complications arising. In developed countries there has been a dramatic reduction in mortality due to decreased urinary tract complications. Instead now pneumonia, nonischaemic heart disease and septicaemia are the leading causes of death.

### **PREVENTION**

The dictum "Prevention is better than cure" is very relevant in spinal cord injuries and a very strong focus should be given on it. This could be done by public awareness programmes and implementing legislation which can help prevent accidents in various sectors such as transport, agriculture, industry and sports. Increased awareness should be promoted to prevent non-traumatic causes of spinal cord injury such as tuberculosis of the spine.



## **ASCON – ASIAN SPINAL CORD NETWORK**

### **ASCoN**

ASCoN consists of a group of organisations in the Asia region that have come together to share and learn from each other in all aspects of spinal cord injury management, from initial treatment of the patient to re-integration of the person.

### **BACKGROUND**

ASCoN was initiated in 2001 following a meeting of regional experts during the International Conference on Spinal Cord Lesion Management hosted by the Centre for the Rehabilitation of the Paralysed (CRP), Bangladesh. Through the Network it was hoped that

- organisations working in the field of spinal cord injury management could address similar problems experienced;
- there would be increased opportunities to learn from each other;
- good examples of spinal cord injury management could be replicated across the region.

ASCoN became an affiliated society of the International Spinal Cord Society (ISCoS) in 2004.

### **OBJECTIVES**

To strengthen spinal injury services and human resource development for organisations and people working in spinal injury management in the Asia region.

To share information, ideas and knowledge of best practices in spinal cord injury management among members.

## ACTIVITIES

### Co-ordination and Networking

Members represent 46 organisations throughout 16 countries in the Asia region including:

Afghanistan, Bangladesh, Bhutan, Cambodia, India, Indonesia, Japan, Korea, Laos, Myanmar, Malaysia, Nepal, Pakistan, Sri Lanka, Thailand and Vietnam.

An Executive Committee acts as the decision making body of ASCoN. An annual general meeting takes place during the ASCoN Conference and provides the opportunity for members to plan activities and to meet at least once a year on a face to face basis. The Executive Committee is represented by:

Dr Fazlul Hoque, (Chairman 2006), Centre for the Rehabilitation of the Paralysed, Bangladesh

Mrs Maggie Muldoon, (Secretary), John Grooms Overseas, Sri Lanka

Dr Apichana Kovindha, Chiang Mai University, Thailand

Dr Capt Dilip Sinha, Hope Hospital, India

Dr H S Chhabra, Indian Spinal Injuries Centre, India

Prof Than Toe, Yangon General Hospital, Myanmar

Mr Eric Weerts, Handicap International, Vietnam

Ms Esha Thapa, Spinal Injury Rehabilitation Centre, Nepal

Mr Cyril Siriwardane, Spinal Injuries Association, Sri Lanka

John Grooms Overseas supports the Executive Committee in the overall co-ordination of ASCoN and is committed to its ongoing capacity development.

## **Newsletter**

A newsletter is produced and distributed to members on a regular basis. Members contribute articles which are edited and included in the Newsletter. The Newsletter is a useful means of sharing information on developments in spinal injury management and innovative approaches adopted by various member organisations.

## **Exchange Visits**

Exchange visits among member organisations are used to provide exposure to different models of spinal injury service delivery for staff and students from spinal injury centres across Asia. This activity is proving to be an effective, practical and efficient way of supporting the development of services and the human resources involved in this area of work, where cultures are similar and resources limited.

## **Short training courses**

In-country and regional training opportunities are available for staff from ASCoN member organisations through short training courses which are organised and conducted by ASCoN members. The short training courses relate to specific elements of comprehensive spinal cord injury management. Examples of current training courses include training of trainers in spinal injury management, active rehabilitation, surgical management and nursing management.

## **Annual Conference**

Each year the annual ASCoN regional conference is hosted by an ASCoN member organisation. The Conference covers all aspects of spinal cord injury management, treatment, rehabilitation and community integration. It also provides an

opportunity for people in the Asia region to come together and network with others regionally and internationally, to share ideas and discuss or debate dilemmas and the latest developments and innovations in spinal injury management. The conferences hosted to date include:

2001 at the Centre for the Rehabilitation of the Paralysed (CRP), Bangladesh;

2002 at the Indian Spinal Injuries Centre, (ISIC), India;

2003 at the Dept of Rehabilitation Medicine, Chiang Mai University, Thailand;

2004 at the Spinal Injury Rehabilitation Centre, (SIRC), Nepal;

2005 at the Hospital for Rehabilitation and Professional Diseases, in collaboration with Handicap International, Vietnam.

The 2006 ASCoN conference will be hosted by CRP in Bangladesh.

### **ASCoN Guiding Principles for Management of Spinal Cord Injuries**

The ASCoN Guiding Principles for Management of Spinal Cord Injuries were first published in 2006. These guiding principles summarise all aspects of spinal injury management including prevention, extrication from site, first aid, transportation, acute management, evaluation, surgical management, comprehensive rehabilitation (physical, psychosocial, sexual and vocational), management and prevention of complications, home modification, reintegration into community and follow-up.

The guiding principles are useful for all professionals involved in spinal cord injury management, and particularly for professionals who

are new to the field and for centres which have just been established or are in the process of being established. They can also assist policy makers in designing rehabilitation services and sensitize them for implementing public awareness programmes and legislation for prevention.

ASCoN plans to work on more detailed guidelines for each specific aspect of the Guiding Principles and welcomes constructive criticism for their further refinement and improvement.

## **Research and Information**

There are many innovations and examples of models of good practice in the many different aspects of comprehensive spinal cord injury management across the Asia region. There is much to learn and to share and ASCoN can provide the platform to facilitate country specific or regional multi-centred research studies.

ASCoN will also be used as a vehicle to collect and disseminate materials related to all aspects of comprehensive spinal cord injury management, awareness and prevention and in doing so will increase access to relevant and appropriate information in all of the countries represented in the Network. This will support the ongoing development of services and the persons responsible for delivering such services.

## **Contact Details:**

Maggie Muldoon, ASCoN Secretary

John Grooms Overseas

17 Cross Road, Mount Lavinia, Sri Lanka

Tel: +94 11 2717258

Email: [jgoverseas@slt.net.lk](mailto:jgoverseas@slt.net.lk)

[www.ascononline.org](http://www.ascononline.org)