SUMMARY

Summery

Management of patients with spinal cord injury is an anaesthetic challenge, not only in the acute phase but in the chronic phase.

Extrinsic as well as intrinsic factors play a role in the loss of spinal cord function. The extrinsic factors are related to fractures of the spinal column and/ or disruption of the intervertebral disc or the supporting soft tissues around the vertebral column. The primary intrinsic is the direct of the traumatizing forces on the venules of the gray matter or the direct disruption of nervous tissue itself. The primary injury evantually proceeds to secondary injury of cord ischaemia and oedema.

The pathophysiological changes resulting from impact impact injury to spinal cord suggest variety of possible causes related to mechanical, vascular, biogenic amines and free radical chemical changes which occur over a period of hours after impact.

The complication of cord injury involve the respiratory, cardiovascular, temperature regulatory and genitourinary systems. Respiration is compromised according to the lever of injury. There is hypotension and bradycardiab in the acute phase, also the patient is sensitive to volume changes and is at risk of developing pulmonary oedema. In chronic phase autonomic hyperreflexia is a major problem. It may lead to cerebral or retinal hamorrhage. These tend to be poikilothermic and their temperature from the surrounding. Hyperkalaemia may occur after the use of succinylcholin and it may be dangerous. Also hypercalcemia and osteoporosis put the patients at risk of fractures with more neurological damage. Usually there is impairment of renal functions, so electrolyte balance and intravascular should be assessed carefully.

Emergency management of patients with spinal cord injuries should start at the place of accidents, it includes methods of transportation, airway management, cardiovascular support and care of bladder.

Conservative treatment by traction and support better than early surgical intervention except if there is progression of neurological deficit.

Medical treatment has been tried to reduce and reveres the pathophysiological respones to injury and improve functional recovery of the spinal cord.

Preoperative assessment including history taking, physical examination and investigation should be done carefully.

Choice of anaesthesia whether general or regional, is based on cardiorespiratory alteration which are demonstrated in these patients.

Postoperative care is essential especially for patients with respiratory impairment and for patients who become bed ridden for long period.