

Summary

The vertebral column has 33 vertebrae, each separated by fibro cartilaginous intervertebral disc. Its function is to support the trunk and to protect the spinal cord. The usual number of vertebrae is 7 cervical, 12 Thoracic, 5 lumbar, 5 sacral and 4 coccygeal.

The function of the spine is primarily biomechanical that, it is involved in the transference of loads placed on the head, trunk and extremities and it is act as a protective armor for the spinal cord. It must permit sufficient motion to take place between its members to allow physiological movements of the body parts while maintaining an alignment consistent with its role as protector of the cord.

Classifications of fractures spine: fractures of cervical spine, fractures of thoracolumbar and sacral fractures.

The main causes of fractures spine fall into the following categories: Traumatic: Motor vehicle accidents (MVAs), falls, sports injuries, objects falling onto the head, assault. Non-traumatic: Degenerative, infective or oncogenic spinal lesions.

The incidence of spinal cord injury worldwide stands at about 20 new cases per million of population a year. Spinal cord trauma can lead to different degrees of motor and sensory loss.

Trauma to the spinal cord initially causes hemorrhage, hypoxia and edema in the central gray matter, gradually increasing over several hours and extending peripherally from the center of the cord, and is dependent on the extent of the injury. The neurological damage that is incurred at the time of mechanical trauma to the spinal cord is called "primary injury". The primary

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injury provokes a cascade of cellular and biochemical reactions that leads to further damage. This provoked cascade of reactions is called "secondary injury".

The International Standards for Neurological and Functional Classification of Spinal Injury, endorsed by both the American Spinal Injury Association (ASIA) is recommended and attached for information.

Plain radiographs, Computed tomography and Magnetic Resonance Imaging MRI are best for suspected spinal cord lesions, ligamentous injuries, or other soft tissue injuries.

A good examination of the patients with suspected trauma to the spine by physical examination and neurological examination, including a sensory and motor examination, is required to classify the level of injury. The classification standard endorsed by the ASIA

Management of fractures spine starts before reaching hospital, in the form of adequate immobilization before and during transport to prevent active and passive movements of the spine. The measures includes placing on back board, head fixators, neck collars, in addition to maintaining patent airway and prompt fluid resuscitation. Then the pharmacological and surgical management according each fracture.

Rehabilitation is the process of restoration of function for persons with disorders of the nervous system. This process involves application of strategies aimed at reducing impairments, disabilities and handicaps, and ultimately enhancing quality of life for persons with neurological disorders. The practice of rehabilitation involves a team process; the patient is the ultimate target of treatment, but at the same time serves as a member of the team. Neurologists now are strongly involved in the practice of rehabilitation.