

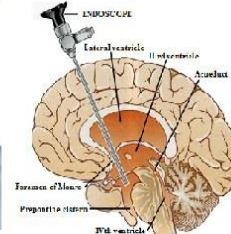
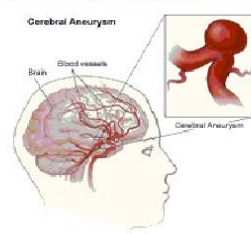
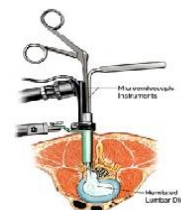
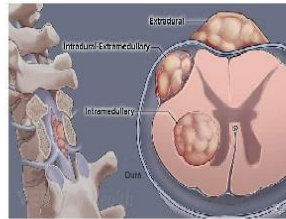
NEUROSURGERY CLINIC



DR. SARANG GOTECHA
(MCH NEUROSURGERY)
CONSULTANT BRAIN AND
SPINE SURGEON

PHONE: 9322288645 EMAIL: dr.saranggotecha@gmail.com www.dr.saranggotecha.com

FELLOWSHIP IN MINIMALLY INVASIVE SPINE SURGERY, SEOUL
WORLD FEDERATION OF NEUROSURGICAL SOCIETIES FELLOWSHIP(WFNS) FELLOWSHIP, SINGAPORE



SPECIALITIES: BRAIN TUMOUR SURGERIES, MICROVASCULAR SURGERIES,
NEUROENDOSCOPIC SURGERIES, TRANSNASAL ENDOSCOPIC SURGERIES, MINIMALLY
INVASIVE SPINE SURGERIES, COMPLEX SPINE SURGERIES, PEDIATRIC NEUROSURGERIES

SPINE AND SPINAL DISORDERS

WHAT IS A SPINAL COLUMN?

It is responsible for transmission of body weight from the head to the pelvis and protection of the spinal cord and nerve roots. The spinal column consists of bony vertebrae connected by the cartilage-like structures (discs), ligaments and facet joints. The spine is a mobile structure and its mobility depends on the integrity of these structures. A number of disease processes can affect the spine and result in functional failure producing a variety of symptoms and signs such as pain, neurological deficits or deformity

Degenerative Diseases of the spine

Disc prolapses can result in spinal cord (commonly in the neck) or nerve root (commonly in the neck or back) compression.

Degenerative changes can cause narrowing (stenosis) of the spinal canal or exit channels of the nerves and also result in spinal cord or nerve root compression.

Treatment is a combination of medication, physiotherapy, pain injections or surgery depending on the exact problem and the severity of the symptoms.

Tumours of the spine

Includes tumours of the spinal column or the spinal cord. Tumours may be

- Primary(starting from the spine)
- Secondary (due to spread from the other areas such as lung breast, kidney or prostate for example)

Symptoms

- back pain
- neck pain
- leg pain
- arm pain
- neurological symptoms(weakness, numbness, unsteadiness of walking, bladder/bowel problems, loss of dexterity in hands)

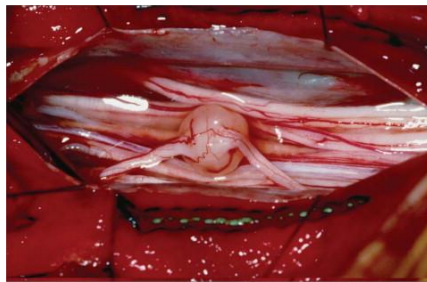
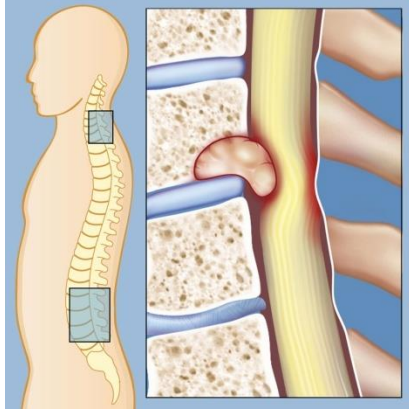
Treatment

depends on the

- overall medical condition
- extent of tumour
- severity of symptoms and signs

types of treatment

- surgical decompression to relieve spinal cord or nerve pressure
- additional procedure to support the spine
- radiotherapy or chemotherapy are often necessary



SPINAL TRAUMA

- Injury to the spine can result from many causes. Spine fractures can cause pain or neurological problems. Treatment with surgery is necessary in cases when the spine is considered to be unstable or when there is a blood clot or disc material causing acute spinal cord or nerve root compression.

SPINAL CORD INJURY

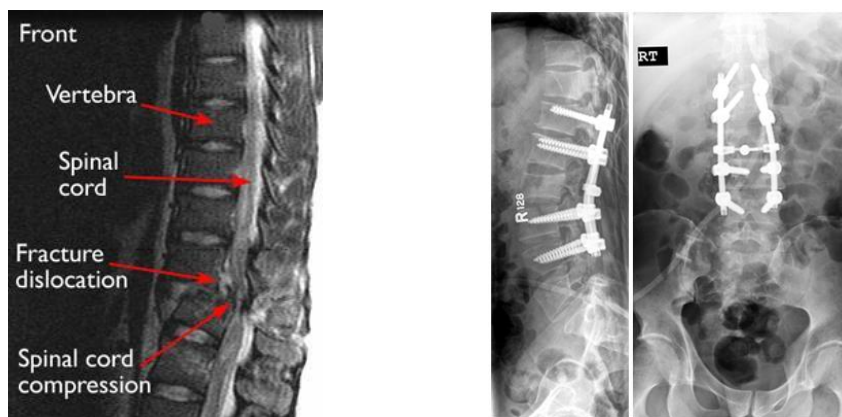
- Damage to the spinal cord can affect all nervous functions that are controlled at and below the level of the injury and in the most severe cases can result in paralysis, loss of sensation and loss of bowel and bladder function.
- there are more than 30 bones that make up the spine. These bones(vertebrae) and the cushions between the vertebrae(discs) allow the back to bend and protect the vulnerable spinal cord from injury

CAUSES

- Road traffic accidents(the most common cause)
- falls
- assaults
- sports accidents
- weakened or diseased spine (example: osteoporosis)

Damage can occur in one of the following :

- blood clot from the injury causing pressure
- fractured vertebrae can directly damage the spinal cord due to bony fragments pressing on the spinal cord or dislocation of the spine.
- pressure from an extruded fragment of disc material into the spinal canal



Treatment

this is a medical emergency which requires immediate treatment to help reduce the long term effects. Immobilisation of the whole spine is critical from the time of injury.

surgery may be necessary to realign or stabilize the spine and may also be necessary for dealing with blood clots or ruptured disc material pressing on the spinal cord or nerve roots.

Effects

Paralysis and loss of sensation can occur in spinal cord injuries. this is often associated with loss of bladder and bowel control. Recovery of movement and sensation is often and requires intensive physiotherapy.

The process of recovery may take at least 12 months. Deficits that remain after are more likely to remain permanent.

Prevention

- Safety procedures at work and recreation must be followed to reduce the risk of injury
- use of seatbelts in cars. This reduces the risk and severity of brain and spinal injuries.
- be careful when diving into shallow water. Always check the depth before diving. Look for rocks and other hidden objects in the water.

Important

from the time of accident all patients should be assumed to have spinal injury. They must be considered to have an unstable spine and should not be moved unless a life threatening emergency(example: fire)

they must be moved only by trained personnel with adequate care to maintaining natural posture