Sanar International Hospitals

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Department of **Neurosciences**

Introduction

The Department of Neurosciences at Sanar International Hospitals is a centre for clinical excellence and expertise, backed by state-of-the-art infrastructure, leading-edge innovations, and advanced surgical / non-surgical modalities, to cater to the needs of patients suffering from various Neurological and Spine conditions. The Department is managed by a highly specialised team of Neurologists, Interventional Neurologists, Neurosurgeons, and Spine Surgeons, all committed to offering exceptional care to patients with comprehensive treatment plans that adhere to stringent quality benchmarks. The Department is supported by dedicated laboratories, operation theatres, and intensive care units fully equipped to handle complex cases while ensuring a hassle-free experience for patients and their loved ones.

At Sanar, we understand and respect the diverse needs of our patients and hence, offer personalised treatment plans that are curated after detailed evaluation and assessment of the patients, as well as their medical history. Our team is backed by the finest imaging and monitoring modalities, be it conventional surgery or one using a minimally invasive approach, the team has extensive experience in both. The treatment is well supported by a dedicated rehabilitation programme, to aid in the quick recovery of patients.

Specialities

NEUROLOGY

Neurology is a highly specialised branch of Neurosciences that deals with the management of an entire gamut of diseases, disorders and malignancies involving both central, as well as peripheral nervous systems. The central nervous system comprises the brain and the spinal cord, whereas the peripheral nervous system includes the peripheral nerves and muscles. Neurological problems may range from simple disabilities to complex disorders and can prove to be debilitating, or even life-threatening, without proper care. Neurology focusses on the prevention, diagnosis, assessment and management of such conditions using different modalities.

Why choose Sanar International Hospitals?

Sanar International Hospitals has an advanced Neurology Unit, catering to the needs of patients with a wide range of diseases and ailments affecting the organs and structures of the nervous system. Our experts use the finest modalities to assess and treat the patients while keeping their safety and satisfaction at the forefront. The comprehensive treatment plans are carefully curated to address specific needs and requirements of all the patients.

Areas of Expertise –

- **Dystonia:** It is a movement disorder that is marked by the involuntary contraction of muscles, which leads to repeated twisting movements. Dystonia is progressive in nature, which means that it tends to aggravate with time. Surgical management of dystonia is possible with Deep Brain Stimulation, which is usually recommended when the patient is not responding to medication and therapy.
- **Parkinson's Disease:** It is a progressive neurological disorder that affects the patient's motor functions, giving rise to symptoms like slowing down of movement, frequent tremors, and muscle rigidity. The symptoms are not evident initially and tend to aggravate slowly. There is no cure for Parkinson's, however, the condition can be managed with the right treatment and care.

- **Essential Tremor:** Essential Tremor is the most common movement disorder, marked by the involuntary rhythmic shaking of the head, hands, legs or even voice. These can affect people belonging to any age group; however, they are more common in those above 60 years of age. The condition affects nearly 1% of the world's population and 5% of the population above 60 years of age

- **Epilepsy:** It is a neurological disorder marked by repeated seizures, loss of awareness, and change in behaviour, all triggered by a disturbance in the brain activity. Epilepsy is non-communicable and can affect anyone, including small children. With the right treatment and care, epilepsy can be effectively managed

- **Alzheimer's Disease:** It is a progressive brain disorder that leads to the gradual loss of memory and thinking capacity. It is the most common cause of dementia (memory loss) and accounts for about 60 to 80% of the cases. Ageing is one of the major risk factors for Alzheimer's disease but it can affect the younger population as well

- **Headache:** It is a very common problem, marked by throbbing, sharp or dull pain in the head. There are several different types of headaches, classified on the basis of frequency, intensity, and location. Primary headaches are caused by overactivity of the pain-sensitive areas of the brain whereas secondary headaches are a symptom of some underlying condition

- **Cerebral Palsy:** The term is used for various disorders that affect the patient's movement, posture, and balance. It develops in early childhood and is a result of damage to the developing brain while the child is still inside the womb

NEUROSURGERY

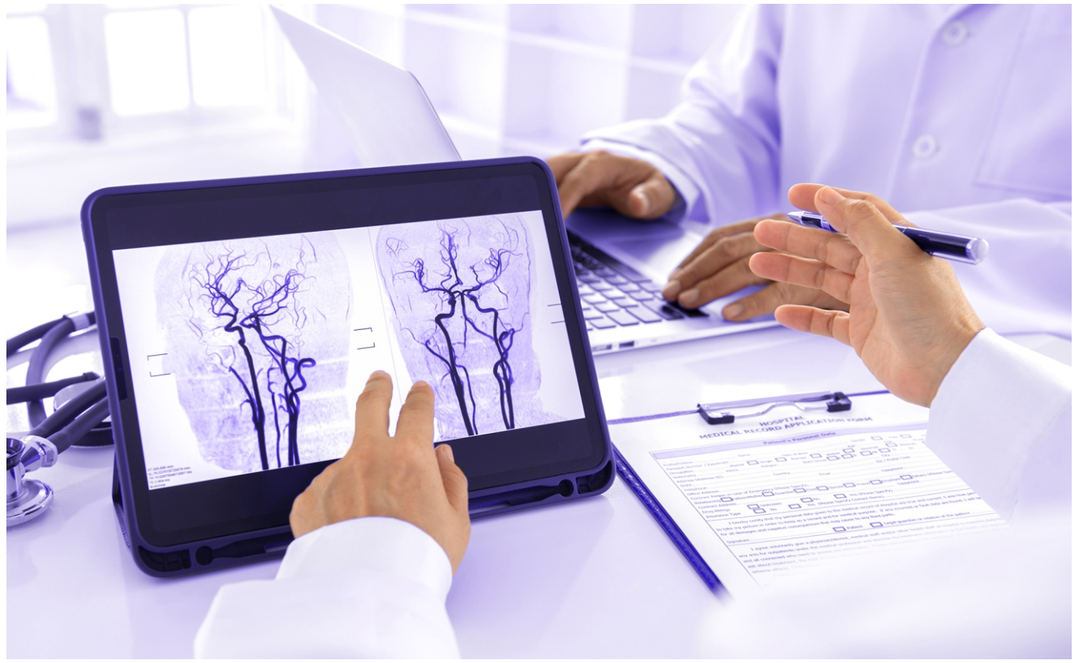
Neurosurgery refers to any surgical intervention that is performed to treat and manage the conditions affecting the brain, spine, and associated structures, such as the spinal cord, spinal column, and peripheral nerves. Patients are usually recommended to go for surgery when they stop responding to medication and other non-invasive treatments. Neurosurgical procedures are quite complex and require immense specialisation. These can be performed via the conventional approach or following a minimally invasive technique.

Why choose Sanar International Hospitals for Neurosurgery?

The Neurosurgery Unit at Sanar International Hospitals offers high-end facilities and services to ensure effective surgical management of patients with the most complex and rare neurological conditions. We bring together an expert team of neurosurgeons, with decades of expertise in the field, adept in handling complex and critical cases. The hospital has dedicated surgical units where all such procedures are performed while ensuring strict adherence to stringent safety and quality protocols. A fully equipped Intensive Care Unit is available for catering to the needs of patients during their initial recovery phase. At Sanar you can get access to the most advanced surgical modalities, both conventional, as well as minimally invasive.

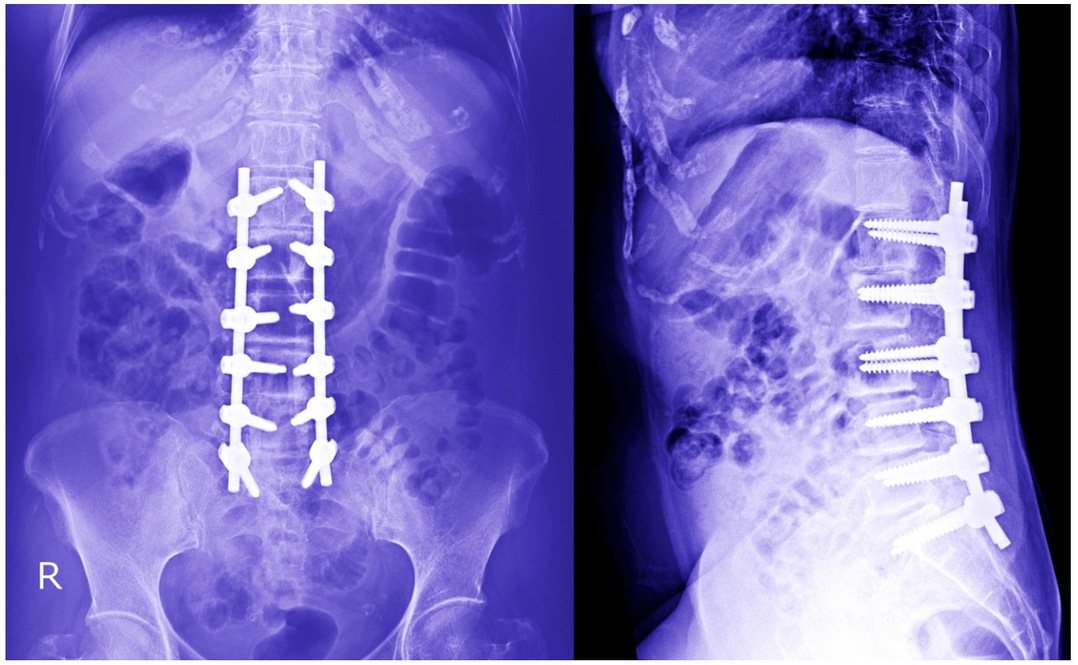
Areas of Expertise –

- **Stroke Management:** Stroke is a debilitating / life-threatening condition that is likely to affect 1 out of every 4 adults, above the age of 25. It refers to a condition marked by the sudden death of brain cells due to the disrupted supply of oxygenated blood to it.



- **Hydrocephalus:** Hydrocephalus is a neurological condition in which the cerebrospinal fluid starts building in the deep brain cavities, also known as ventricles. The fluid causes these ventricles to swell up, inducing increased pressure on the brain
- **Traumatic Brain Injury:** Traumatic Brain Injury refers to complex injuries of the brain that may be sustained due to a violent blow, trauma or accident. Such injuries can affect any part of the brain and give rise to varied symptoms
- **Carotid Stenosis:** Carotid Stenosis is a condition in which the carotid artery of a person becomes narrow, thereby limiting the flow of oxygenated blood to the brain. This can cause the brain cells to die, giving rise to serious and life-threatening complications
- **Brain Aneurysm:** Brain Aneurysm refers to a weak spot on any of the blood vessels found within the brain. When blood flows through this section of the vessel, it is pushed outwards, leading to the formation of a tiny bulge. Aneurysms can sometimes rupture or burst, leading to Subarachnoid Haemorrhage (SAH)
- **Brain Haemorrhage:** Brain Haemorrhage, or brain bleed, is a potentially life-threatening condition marked by bleeding in the brain or the areas around it, which usually happens due to a ruptured aneurysm or a traumatic injury to the skull. It is one of the leading causes of stroke, responsible for nearly 15 to 30% of all cases
- **AVM:** An Arteriovenous Malformation refers to a tangled connection between the arteries and veins, that disrupts the normal flow of blood to and from the brain. If left untreated, the problem can put you at a high risk of developing complications like brain damage and stroke as it prevents the brain cells from getting enough oxygenated blood

- **DBS (Deep Brain Stimulation):** Deep Brain Stimulation is an advanced treatment modality that works by delivering controlled electric impulses to certain areas of the brain. The treatment is recommended for patients with complex neurodegenerative conditions and involves the surgical implantation of tiny electrodes in the affected part of the brain
- **Neurovascular Surgery:** Neurovascular Surgery is an umbrella term used for any conventional or minimally invasive surgical procedure that is performed on patients with complex vascular problems involving the brain and spine.
- **Neuroendoscopy:** Neuroendoscopy, also referred to as endoscopic neurosurgery, is an advanced technique that uses detailed imaging guidance to perform various neuro interventions through a minimally invasive approach
- **Awake Craniotomy:** Awake Craniotomy, also referred to as awake brain surgery, is a type of surgery that is performed on the brain while the patient is awake and alert. The procedure is used for the treatment / management of various Neurological conditions like Brain Tumours or Epileptic seizures
- **Back Pain Management:** Back Pain is a very common problem that affects nearly 84 per cent of the adult population in their lifetime. In India, about 8 per cent of people are living with a disability related to the same. Back pain can be the result of various factors and this can range from shooting pain to a stabbing sensation



SPINE SURGERY

Spine Surgery refers to any surgical intervention that is performed to address complex problems of the spine and associated structures. These can either be congenital or acquired later in life, due to an underlying disease, injury, accident, or other trauma. Spine surgery can be performed using the conventional approach or via minimally invasive means. Surgical intervention is usually recommended for patients who have a debilitating spine condition that cannot be managed by medication alone.

Why choose Sanar International Hospitals for Spine Surgery?

Sanar International Hospitals is a centre for comprehensive spine care technology, where you can find advanced solutions to the most complex spine diseases and disorders. The hospital has a dedicated spine unit, offering comprehensive evaluation and care to patients with a wide range of spine conditions. We have a dedicated team of spine specialists with years of expertise, ensuring quality care and treatment. At Sanar, we resort to the latest innovations and advancements that help us deliver precision-based results with added safety. Our expert team comprises of highly efficient and specialised spine surgeons, doctors, radiologists, anaesthesiologists, physiotherapists and dedicated nurses, all working in synergy to give you an experience that is at par with international standards.

Areas of Expertise –

- **Spinal Deformities:** Spinal deformities refer to the structural or functional deformities in the spine, often marked by pain, neurological complications and problems related to mobility. Kyphosis, Lordosis (swayback), and Scoliosis are three of the most common spinal deformities that are marked by an abnormal curvature in the vertebral column. Such deformities may be present since birth or can develop post-birth

- **Spinal Infections:** It is an umbrella term used for various infections that develop when microbes like bacteria, viruses and fungi invade the spine. Although such infections are quite rare, these are potentially serious and can progress to life-threatening complications. The Infection can target any part of the spine, be it the vertebrae, the spinal canal, the discs or the spinal cord

- **Spinal Cord Injuries:** Spinal Cord Injury can be caused by a blunt physical impact that could be the result of an accident, fall or trauma. Such injuries can affect any part of the spinal column and have been predominantly linked with road traffic accidents. A blunt impact can lead to crushing and fracture, whereas penetration of sharp objects can cause tearing. Spinal cord injuries are often debilitating and require months of rehabilitation

- **Spine Tumours:** These refer to all the cancerous / non-cancerous growths that develop on any part of the spinal column, owing to uncontrolled cell growth. Tumours that develop within the spinal cord are commonly referred to as Intramedullary Spinal Cord Tumours, whereas, those that develop on the outer side of the spinal cord are referred to as Extramedullary, Intradural Spinal Tumours (EISTs)

- **Spinal Stenosis:** The condition is marked by the narrowing of the space within the backbone, which puts an additional strain on the nerves and spinal cord, leading to their compression. The problem is most likely to affect the spinal canal in the lower back and around the neck. Spinal stenosis can be very painful and even limit the range of motion and mobility of the person

- **Lumbar Decompression:** It is also known as Lumbar Laminectomy, a procedure that is performed on patients with Lumbar Spinal Stenosis. During the surgical intervention, the surgeon widens the spinal canal by removing a part of the lamina. This helps to create more space for the nerves and spinal cord and relieve excess pressure from them

- **Lumbar Discectomy:** The procedure is recommended for patients who have a disc in the lower part of the spinal column. The surgery is carried out via a minimally invasive approach, in which the doctors use detailed imaging guidance to perform the surgery via tiny keyhole incisions.

- **Laminectomy:** It refers to the surgical extraction of the bone spurs so as to relieve pressure from the nerves that have been compressed by these. It is a major surgery that can be performed on any part of the spine, i.e., cervical, lumbar, sacral and thoracic.

- **Spinal Fusion Surgery:** The surgical procedure typically aims at addressing the problems concerning the smaller bones within the spinal column. As the name suggests, it involves the permanent fusion of two or more adjacent vertebrae into a single bone. This is done to reduce motion between the bones, so as to relieve back pain.

- **Minimally Invasive Spine Surgery:** It is a new-age technique that has revolutionised spinal care by making it possible for doctors to perform complex spinal procedures via tiny keyhole incisions. Minimally invasive spine surgery uses detailed guidance offered by a surgical camera to precisely guide the equipment to address the problem.

- **Foraminotomy:** The surgery aims at enlarging the opening where the nerve roots exit the spinal column. This is done to reduce unnecessary pressure that has been building up on the nerves due to compression. Foraminotomy is usually performed on patients with foraminal stenosis.

- **Vertebroplasty:** Vertebroplasty is also known as Kyphoplasty. It is a minimally invasive procedure that is recommended for patients diagnosed with spinal compression fractures. The aim of the surgery is to offer stability, relieve pain, and involves the injection of bone cement in the affected vertebra. The procedure is performed via a tiny puncture and takes about an hour.

The Department of Neurosciences at Sanar International Hospitals is equipped with state-of-the-art modalities supported by a team of medical professionals with extensive experience in their relevant fields with an aim to provide result-oriented personalised treatment for patients.