

MAGICAL HEALING POSSIBLE THROUGH MODERN NEUROSURGERY

With the advent of modern technology and advances in surgical techniques and skills results of Neurosurgery are excellent.. Many complicated and near death brain and spine problems can be cured now by the magic of modern micro-neurosurgery, writes renowned Neurosurgeon Dr. ARUN OOMMEN

If someone asks which is the most complex organ in the human body the answer will be almost unanimously –The Brain and spinal cord.. Naturally the field of medicine dealing with surgical problems of the brain and spine will be the most challenging, Intricate and unnerving... Neurosurgery has over the years evolved to become a really challenging medical field of practice but thanks to extensive research, publications, vast advances in surgical techniques and instrumentations the results have tremendously improved over the years

There was not much advancement in neurosurgery until late 19th early 20th century,

In 1879 after locating it via neurological signs alone, Scottish surgeon William Macewen (1848-1924) performed the first successful brain tumor removal. On November 25, 1884 English surgeon Rickman Godlee (1849-1925) performed the first primary brain tumor removal, via trephination. On March 16, 1907 Austrian surgeon Hermann Schloffer became the first to successfully remove a pituitary tumor.

While all physicians work to heal people, neurosurgeons often have especially gratifying outcomes from successful surgeries in which patients are freed from severe pain, physical disabilities or impending death. Neurosurgeons can also participate in cutting-edge research, helping increase medical knowledge of illnesses for which there is currently no cure.

Surgery on the brain and spinal cord requires the greatest

of skills, surgical knowledge, perseverance and physical endurance. Neurosurgeons work long hours on complex tasks. An average Neurosurgery can take around 4-6 hours to complete. In addition to neurosurgeons, neurosurgical patients has round the clock care of neuro anaesthetists, neuro intensivists, neurologist, neuro radiologists, Neuropsychiatrist, trained Neuro Nurses, Neuro physiotherapists, Nutritional therapists and other allied specialists.

Some of the modalities that revolutionized Neurosurgery and has significantly improved the outcome include a fully equipped theatre with sophisticated operating microscopes, neuro navigation system, Cavitron ultrasonic surgical aspirator (CUSA), Neuro monitoring system, Intra operative MRI, endoscopic and minimally invasive surgeries, sophisticated implants etc

Neurosurgery caters to a wide spectrum of diseases or anomalies pertaining to Brain and spinal cord. Head injury secondary to road traffic accidents, falls, assault etc are managed by a Neurosurgeon. They perform a large number of complicated procedures like removing clots from brain following accident induced head injuries repairing skull fractures and spine fractures. With ever increasing research and understanding of head trauma the success rate of treatment is increasing and is almost 95% in our centre. Also massive clots formed following other spontaneous bleeding, like hypertensive bleeds, abnormal vessel bleeds etc are also tackled by neurosurgeons. Minimally invasive Interventional therapies like coiling, embolisation, etc are

very widely being done and are producing excellent results. A wide spectrum of tumours and cancers can involve the brain and spinal cord. With the advent of modern technology, much improvement in surgical techniques and better understanding of different types of tumours and cancers, many types of tumours like Meningiomas, Low grade gliomas, pituitary tumours, germ cell tumours, scwanomas, etc have entered the group of completely treatable tumours. Many of the most complex brain tumours can be removed surgically now. Extensive research and studies are going on and more and more treatment modalities are being tried to fight this dreaded disease. Immunotherapy/biological response modifier (BRM) therapy, Oncolytic virus therapy. Targeted therapy of faulty genes or proteins, Gene therapy, Hormonal therapy, photodynamic therapy and Electric field therapy are some of the treatment modalities that may bring hope in the future.

Neck pain and back pain is increasing many fold and problems secondary to disc prolapsed are increasing. With the advent of minimally invasive surgeries and better understanding of the anatomy discs surgeries are now very safe and produce very good results.

Also removing damaged areas of the brain associated with epilepsy is also being done in many centres. Brain and spine related congenital anomalies and also very complex and are dealt by neurosurgeons.

The learning curve for becoming a trained Neurosurgeon is steep ..What it takes to become a Qualified Neurosurgeon in India. After the 6 years of basic Medical Training and internship, there is a 3 year Masters degree Training in surgery followed by 3 years superspeciality training in Neurosurgery Proper. This tolls to around 12-14 years of extensive education, Intense Training, surgical learning and research.. Following which a Neurosurgeon can opt for his field of subspeciality like Neuro Oncology, Neuroendocopy, Vascular neurosurgery, Paediatric neurosurgery, spine, Trauma, Functional Neurosurgery etc which requires further 1-2 years of fellowship training.

Many of the neurosurgical patients are critically ill and required prolonged period of medical care and is a journey from near death to life which naturally increases the bond between the doctor and patient and may even last a life time.



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