

(113-MED-17-03) M.Ch. - NEURO SURGERY

Significance of Program

M.Ch Neurosurgery provides training to diagnose and surgically treat patients with injury or diseases/disorders of the brain, spinal cord and spinal column, and peripheral nerves within all parts of the body. The speciality of neurosurgical care includes both adult and pediatric patients.

Career Options:

- Clinical Associate (Neurosurgery)
- Consultant (Neurosurgery)
- Professor.
- Researcher.
- Senior Neurosurgeon.
- Senior Resident (Neurosurgery)
- Faculty in Medical Colleges

Program Objectives

- Demonstrate the ability to diagnose and manage disorders of the central nervous system that fall within the purview of general surgery.
- Demonstrate the ability to evaluate and manage head and spine injuries.

Outcomes of the Program

- Recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy They have mastered most of the competencies, pertaining to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system. .
- To be aware of the contemporary advances and developments in the discipline concerned.
- Acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology Knowledge and skills that the trainee must acquire during the training period related to research works. .
- Basic skills in teaching of the medical and paramedical professionals.

Major Course Outlines

1. Clinical Neurosurgery including history taking, physical examination, diagnosis, selection and planning of relevant investigations, appropriate treatment and rehabilitation of patients with neuro surgical disorders including those presenting as emergencies.

2. Essentials of Clinical Neurology especially with reference to disorders common in India and those likely to present to the Neurosurgeons.
3. Basic medical sciences relevant to the practice of Neurosurgery including anatomy, physiology, biochemistry, pharmacology and epidemiology.
4. Surgical Neuropathology and the essentials of the Pathology of Neurological disorders likely to present to the Neurosurgeon.
5. Principles, technique and interpretation of Neuro radiological procedures like CT and MRI scans, angiography and interventional procedures
6. Principles and interpretation of common Neuro-physiological, Neuro-ophthalmological, Neuro-otological and Neuro-endocrinological tests especially with reference to Neuro surgical disorders.
7. Performance of common neurosurgical operations in the supra and infra-tentorial compartments, in the spine and on the peripheral nerves—initially under supervision and later independently. Ability to use the operating microscope is mandatory.
8. Familiarity with various types of anaesthesia used in neurosurgery their indications and contraindications, the use of ventilators and techniques of monitoring and resuscitation.
9. Pharmacology of various drugs used in Neurosurgery.
10. Knowledge of the history of neurological surgery and its allied disciplines with special reference to India.
11. Knowledge of recent advances in the field of neurological surgery.
12. Preparation of papers for presentation at scientific conferences and for publication.
13. Introduction to the techniques involved in the organization and development of a department, its subsections and newer facilities.
14. It is desirable to have micro surgical laboratory training where candidates learn dissection / suturing of intracranial vessels / nerves under microscope and skull base dissections.
15. Development of proper attitudes towards patients, subordinates, colleagues and seniors.
16. Should have knowledge about computers and their applications in clinical practice.

| CORE | Electives | Skill Course |
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| • NEUROSURGERY | Surgery | • Has acquired the competencies pertaining to neuro surgery that are required to be practiced in the community and at all levels of health care system |

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| | | <ul style="list-style-type: none"> • Has acquired skills in effectively communicating with the patients, family and the community • Is aware of the contemporary advances and developments in medical sciences. • Acquires a spirit of scientific enquiry and is oriented to principles of research methodology • Has acquired skills in educating medical and paramedical professionals |
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