DEPARTMENT OF NEUROLOGY

KING GEORGE'S MEDICAL UNIVERSITY, LUCKNOW

NUMBER OF FACULTIES: 8

Name of Faculty	Designation
Dr. Ravindra Kumar Garg	Professor & Head
Dr. Rajesh Verma	Professor
Dr. Hardeep Singh Malhotra	Professor
Dr. Praveen Kumar Sharma	Additional Professor
Dr. Neeraj Kumar	Additional Professor
Dr. Ravi Uniyal	Associate Professor
Dr. Shweta Pandey	Associate Professor
Dr. Imran Rizvi	Assistant Professor

DM CURRICULUM

Assessment Year 2020-2021

Learning Outcomes.

1. Skills in the clinical diagnosis, planning of investigations and manage common conditions in the specialty by relevant current therapeutic methods.
2. Capabilities to take independent decisions in emergency situationsperform required procedures in Neurology and manage complications.
3. Ability and skills to perform and interpret investigative procedures related to the specialty.
4. Ability to teach Post graduates, undergraduate and nursing students inthe basic management of the diseases in Neurology.
5. Familiarity with allied and general clinical disciplines to ensureappropriate and timely referral.
6. Ability to conduct research.
7. Ability to become a consultant and capability of organizing specialtyDepartments

Teaching and Learning methods

The fundamental components of the teaching programme include:

1. Case presentations & discussion. Once a week.
2. Seminar. Once a week
3. Journal club. Once a week
4. Grand round presentation .once a week
5. Faculty lecture teaching. once a month
6. Mortality Review -Once a Month

7.A poster and one oral presentation at least once during the training duration in a national level conference.

The rounds include bedside sessions, file rounds & documentation of case history and examination, progress notes, round discussions, investigations and management plan. The training program focus on knowledge, skills and attitudes (behavior), all essential components of education. It is being divided into theoretical, clinical and practical in all

aspects of the delivery of the rehabilitative care, including methodology of research and teaching.

Theoretical: The theoretical knowledge is imparted to the candidates through discussions, journal clubs, symposia and seminars. The students are exposed to recent advances through discussions in journal clubs.

Clinical: The trainees are attached to a faculty member to be able to pick up methods of history taking, examination, prescription writing and management in rehabilitation practice.

Bedside: The trainees work up cases, learn management of cases by discussion with faculty of the department.

Journal Clubs: This is a weekly academic exercise. The candidate would summarize and discuss the scientific article critically. A faculty member suggests the article and moderates the discussion, with participation by other faculty members and resident doctors.

Research: The students carry out the research project and write a thesis/ dissertation. He/ she would also is given exposure to partake in the research projects going on in the departments to learn their planning, methodology and execution so as to learn various aspects of research.

COURSE CONTENTS:

Basic Sciences

• Neuroanatomy: Neuroanatomy of Central, Peripheral and Autonomic nervous system, Neuromuscular junction & muscle o Histology of central and peripheral nervous system, Functional Neuroanatomy, Cerebrospinal fluid, Blood brain barrier, Embryology & development of nervous system, Cerebral circulation

• Neurophysiology &Neurochemistry: Neuronalsignalling, Synapse, Neurotransmission (chemical & electrical), Somatosensory physiology,Visual perception, Auditory perception. Motor control & generation of normal movement,Tone, Posture and Gait, Higher cerebral functions, Memory, Language,Sleep, Neuro-endocrinology, Autonomic nervous system

• Neuropharmacology

• Neuro-Genetics

• Neuroradiology: Plain radiography of skull &spine,Myelography, Angiography, C.T. Scan, Magnetic resonance imaging, Doppler study of the cerebral circulation, Functional cerebral imaging (PET, SPECT)

• Neuropathology:Interpretation of gross specimens of cerebral pathology, Histology of nerve, muscle, and brain. Histopathology of muscle, Histopathology of brain, Histochemistry and immuno-histochemistry

• Neurology: Disorders of consciousness, Disorders of cortical functions, Language disorders,Cerebrovascular disorders, Epilepsies, Headache, Movement disorders, Ataxias & disorders of cerebellum, Gait disorders, Cranial Neuropathies, Demyelinating &dysmyelinating disorders, Infections of central and peripheral nervous system, Metabolic disorders of nervous system, Nutritional disorders of the nervous system, Diseases due to toxins, chemicals & drugs o Congenital and Developmental disorders of nervous system, Neoplasia of nervous system,craniospinal trauma, Cerebrospinal Fluid disorders, Hydrocephalus, Mental retardation, Cerebral palsy, Disease of peripheral nerves, Neuromuscular junction disorders, Disease of muscles,

• Neuropsychology

• Neuropsychiatry

• Clinical Neurophysiology:

Electroencephalography (EEG): Neurophysiological basis of EEG, EEG Recording techniques, Normal EEG including Sleep EEG Maturation of EEG, Abnormal EEG, Video EEG and Long-term recording, Quantitative EEG, Brain death.

Nerve Conductions: Principles of nerve conduction studies, Late responses, Repetitive nerve stimulation, Refractory period and Collision technique, Autonomic nervous system evaluation,

Electromyography (EMG): Principles of needle EMG, EMG in peripheral Nervous system diseases, EMG in central nervous system diseases, Qualitative EMG, Quantitative EMG, MUAP analysis, Interference analysis and Turns-Amplitude Ratio, Single Fibre EMG.

Interdisciplinary training

The following teaching schedule is prescribed for the course:

The Outpatient service - 6 days a week

Major ward rounds – daily

DM Seminars - Once a week

Journal club - Once a week

Case Presentation- twice weekly

Neuroradiology (teaching session) - Once a week

Neurosurgery

During the Neurosurgery posting which is for one month, the candidate is required to attend all the operations and see for himself/herself, the surgical techniques. Postoperative care and complications and selection of cases for surgery are also taught.

Neuroradiology

The trainee is made conversant with the technique and interpretation of carotid/vertebral angiography, pneumoencephalography, Myelography, CT scan and MRI scan. All these investigations are taught under the guidance of a neuroradiologist during one month. Neuroradiology investigations are conducted every day in the Radiology Department.

The resident is imparted training in the technique of application of EEG/EMG/evoked response electrodes. He/She learns to detect various types of artifacts in the EEG and evoked response results. He also learns the handling of EEG/EMG and evoked response machines, under the guidance of technical assistant and the consultants. During the first year of the course, training is imparted in the interpretations of nerve conduction studies, EMG, evoked response and ultrasound studies. He/she is taught the interpretation of EEG records and reports under the guidance of senior colleagues and consultants in the beginning and independently in the second year of training. The trainee is made well conversant with each and every aspect of known knowledge about Neuroanatomy, Neurophysiology, Neurochemistry, Neuroradiology, Neuropharmacology and Applied Neurology by the end of two year training. Related neuropathology and neurosurgery is also taught through bedsides, teaching rounds lectures, seminars and group discussions.

Assessment:

Internal assessment : Every three months using customized Google Form as per standard guidelines.

External assessment : Theory and practical examination.