

MD PATHOLOGY

Post Graduate Training

Based on the available facilities, department can prepare a list of postgraduate experiment pertaining to basic and applied Pathology. Active learning should form the mainstay postgraduate training there should be lectures for postgraduates (at least 20 per year) along with seminars, symposia, group-discussions, journal clubs Each college should have a medical education unit to conduct PG orientation programmes.

The three year training programme for MD Pathology may be arranged in the form of postings to different assignments/laboratories for specified periods as outlined below. The period of such assignments/postings is recommended for 36 months. Posting schedules may be modified depending on needs, feasibility and exigencies

Postings: Total duration – 36 Months.

They will maintain a logbook.

They should have a minimum attendance of 80% in each year for appearing for the final exams

They will submit a thesis/dissertation completed over the training period under a qualified PG guide as per MCI norms.

Histopathology		12 months
Cytopathology		9 months
Hematology and Clinical laboratories	}	9 months
Blood bank		3 months
Autopsy		3 months

In addition to such mandatory postings, two weeks in the departments of cytogenetics advanced techniques such as molecular biology techniques, Immunohistochemistry, Immunofluorescence, electron microscopy and museum techniques will provide exposure to such areas.

The internal assessment, attending conferences, presenting/publishing papers, internship, requirements to be met by the Institutions for training, qualification of PG teachers and guides will be as per MCI/Government/University norms.

The students will have regular scientific discussions during these postings in the form of

- Subject seminars including techniques
- Specimen discussion
- Slide seminars, Topic presentation
- Periodical tests
- Journal Club
- CPC's

Course Content

A. Theory:

- General Pathology including Immunopathology
- Systemic Pathology
- Hematology, laboratory medicine
- Blood Banking including transfusion medicine
- Cytopathology
- Laboratory organization including Quality Control
- Basic Clinical biochemistry
- Autopsy pathology
- Recent advances in pathology and applied aspects

B. Techniques and their application

General

- Principles of sample collection for Hematology and Clinical Pathology
- Histopathology and cytology specimens, urine analysis, stool examination
- Pregnancy tests, semen analysis, biochemical tests
- Waste disposal and universal precautions

Cytology

1. Fine needle aspiration cytology – staining and interpretation
2. Cytology of body fluids – Staining and interpretation

Histopathology

1. Histopathological techniques including section cutting.
Hematoxylin and Eosin stain ,special stains,Immunohistochemistry,
Frozen section
Grossing, problems in tissue processing
2. Special pathology-neuropathology,Dermatopathology etc

Autopsy pathology

1. Anticoagulants
2. Preparation of Leishman's stain and reagents for blood counts
3. Hands on experience in different methods of hemoglobin estimation, RBC, WBC, Platelets and Reticulocyte counts, AEC, PCV, ESR and absolute indices and coagulation tests/work up.
4. Preparation and interpretation of Peripheral smear and Bone marrow.
5. Hemolytic workup including sickle cell preparation, HbF and electrophoresis,QBC etc.
6. Cytochemistry peroxidase/sudan black B,PAS,LAP,NSE and perls' Stain
7. Quality control and use of automated cell counters
8. Cleaning of Glass ware

Blood Bank:

1. Blood grouping and typing
2. Cross matching
3. Coomb's test
4. Donor screening and blood collection
5. Testing for STS,HIV, hepatitis B & C etc.
6. RH antibody titration
7. Cold agglutinin titre
8. Quality control
9. Blood component preparation

Clinical biochemistry

The Biochemistry applied to biochemical investigations.
Basic clinical chemistry.
