

UNDERGRADUTE TRAINING PROGRAMME

Introduction

- Aims of the surgical education for undergraduates are to develop a primary care physician with appropriate knowledge, skill and attitude to treat common disease at the primary care level.
- Emphasis will be laid on the primary care of the injured, care of comatose, common wounds and ulcers, resuscitation of patient with cardiac arrest, initial care of acute abdominal conditions and other emergencies.
- Diagnosis, workup and proper referral of common conditions viz. hernia, lumps in breast, thyroid, piles and fissure & fistula, abdominal lumps, renal stones, varicose veins will be covered substantially

OBJECTIVES:

❖ Knowledge

- At the end of the course, the student shall be able to:
- 1. Describe aetiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children.
- 2. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion.
- 3. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics:
- 4. Describe clinical features and risk factors of common malignancies in the country and their management including prevention.
- 5. Enumerate different types of anaesthetic agents, their indications, mode of administration, contraindications and side effects.

❖ Skills:

- At the end of the course, the student should be able to:
- 1. Diagnose common surgical conditions both acute and chronic, in adult and children;
- 2. Plan various laboratory tests for surgical conditions and interpret the results;
- 3. Identify and manage patients of haemorrhagic, septicæmic and other types of shock;
- 4. Be able to maintain patent air-way and resuscitate a –
 - (i) a critically injured patient;
 - (ii) patient with cardio-respiratory failure;
 - (iii) a drowning case.
- 5. Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children;

- 6. Provide primary care for a patient of burns;
- 7. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
- 8. Treat open wounds including preventive measures against tetanus and gas gangrene;
- 9. Diagnose neonatal and paediatric surgical emergencies and provide sound primary care before referring the patient to secondary / tertiary centers;
- 10. Identify congenital anomalies and refer them for appropriate management.

COURSE CONTENT:

- A combination of system-based model and the spiral model is recommended for the MBBS course:
- Pathogenesis, causes, epidemiology, Clinical Presentation, Investigations, and management of the diseases in the following systems:
 - 1. Skin**
 - Ulcers and wounds, wound infections, burns, skin infections (boils, carbuncle, abscess), cysts (epidermoid cyst, dermoid), skin tumors (basal cell carcinoma, squamous cell carcinoma, melanoma).
 - 2. Head and Neck region**
 - congenital anomalies (cleft lip, cleft palate, branchial cyst and fistula, thyroglossal cyst) swellings of parotid and submandibular glands, oral ulcers, leukoplakia, submucous fibrosis, lichen planus, common jaw tumors, squamous carcinoma of oral cavity, pharynx & larynx.
 - Thyroid swellings (adenomatous goitre, Graves' Disease, papillary and follicular thyroid cancer). Swellings of lymph nodes (tuberculosis, lymphoma, metastatic carcinoma)
 - 3. Arteries**
 - Features of limb Ischaemia, noninvasive vascular diagnostic tests, obliterative atheromatous disease, aneurysms, Raynaud's syndrome, arterial emboli.
 - 4. Veins**
 - varicose veins, deep vein thrombosis, pulmonary embolism.
 - 5. Breast**
 - mastalgia, ANDI, fibroadenoma, cyst, breast abscess, cancer of the breast.
 - 6. Oesophagus** : dysphagia, reflux, hiatus hernia, benign and malignant tumours.
 - 7. Stomach and duodenum**
 - Peptic ulcer- stomach and duodenum, carcinoma of the stomach, gastritis.
 - 8. Small intestine**
 - Small bowel obstruction, intestinal tuberculosis.
 - 9. Colon and rectum**

➤ Amoebic colitis, Ulcerative colitis, colorectal cancer.

10. Appendix

➤ Acute appendicitis.

11. Anus:

➤ Haemorrhoids, Pruritus ani, Fissure-in-ano, Anorectal abscesses, Fistula-in-ano, cancer of the anus.

12. Peritoneum and intraperitoneal abscesses:

➤ Peritonitis.

13. Liver:

➤ Hepatic trauma, abscesses, cancer.

14. Biliary tract:

➤ gall stone disease, carcinoma of the gallbladder.

15. Pancreas:

➤ Acute pancreatitis, pancreatic cancer.

16. Acute abdomen

17. Hernias of the abdominal wall:

➤ Inguinal hernias, femoral hernia, umbilical and epigastric hernia.

18. Urology:

Diagnostic studies and techniques in the urinary tract, trauma to the urinary tract, urinary calculi, urinary tract infection, prostatic hyperplasia, tumours of the kidney, epididymo-orchitis, hydrocele, tumours of the testicle, carcinoma of the penis.

TEACHING LEARNING METHODS

The following strategy is used for organizing teaching learning activities:

a) Lectures are used for teaching the basic principles for 4th semester students of surgery viz. infection, wound healing, shock, trauma.

b) Integrated seminars are utilized during the 6th and 8th semester for teaching system based surgery viz. thyroid and endocrine disorders, GIT, urinary, head and neck and vascular disorders.

c) Clinical teaching **to a group of 20-25 students on surgical Inpatient Wards and OPD's.**

d) Clinical skill training- We teach basic surgical skills to our final year students and interns in minor OT, casualty theatre and main theatre. In the department we also organize yearly workshop on suturing & knot tying where students get an opportunity to acquire hands-on experience on these important skills.

Guidelines for students posted in Department of Surgery 3rd – 4th Semester

➤ This is the first introductory posting in surgery to provide orientation, towards the general functioning of the Department and the nature of clinical work performed in the Department of surgery.

- You will be posted in the surgical Out-patients department. **This is a two weeks posting.** The learning objectives for this session are to learn :
 - the art and science of history taking,
 - general evaluation of overall health;
 - basic principles of examination of a lump;
 - examination of hernia, hydrocoele and abdomen;
 - examination of breast;
 - examination of head and neck
 - evaluation of wounds, ulcers and sinuses.
- You will be required to attend the surgical Out-patient clinic from 9.00 A.M. to 11.30 am. Be punctual as any person coming to clinic after 9.30 A.M. will be marked absent.
- Attendance register will be sent to the Dean.
- You are required to be properly dressed, wear a white coat, with a name plate
- You are required to bring the following:-
 - A pen torch with metal tip, measuring tape, Vernier callipers, stethoscope, patella hammer;
 - Please read “ Norman Browse- An Introduction to the symptoms and signs surgical diseases” or
 - “Hamilton Bailey- Physical signs”, in order to acquire theoretical background of clinical examination.
 - A book by “ S.Das ” has many mistakes, and therefore, not recommended.

5th Semester

- The learning objectives for this session are honing the skills of physical examination.
- **You are again posted in the Out-patient surgical department. The timings are 9.15 A.M. to 12.00 A.M..**
- Attendance Is compulsory
- For this semester utilize your time in examining as many patients as possible. Visit the consultation rooms of all the consultants and senior registrars.
- Remember there is no substitute for seeing the patients.
- You cannot acquire the practical skills by sitting in the Library.
- A famous physician of USA, Sir William Osler said **”To study the phenomena of disease without books is to sail an uncharted sea whilst to study books without patients is not to go to sea at all”**
- Besides seeing patients you should also acquire the following basic surgical skills- wound dressing, debridement , abscess aspiration and drainage, excision biopsy of skin lesions, lipoma and epidermal cysts, skin suturing and knot tying, proctoscopy, rubber banding of piles.

- Please attend minor surgical operation theatre situated at the end of the surgical OPD corridor to acquire the above skills. Please maintain a record of cases seen and surgical skills learnt in a diary/logbook.
- You will be assessed on this.

Assessment of III – V Semesters

- **A weightage of 15 marks for III semester and 25 marks for IV & V semester** will be given in the form of viva questions with short case presentations.

6th Semester

- The learning objectives in the 6th semester are to master the skills of surgical diagnostic evaluation. You are advised to follow a problem based approach (PBL).
- Greet the patient cheerfully with a smile and introduce yourself. Seek patient's permission for interrogation and examination (e.g. "I am _____, a 6th semester student of MBBS).
- Can I ask a few questions about your illness and can I examine you. This will help me in learning the diagnosis and in becoming a good doctor so that I may serve the society well).
- Be extremely polite in your approach. If patient refuses simply thank him and go to a next one.
- Ask presenting symptoms along with duration
- Formulate a diagnostic hypothesis (e) based on the patient's age, gender, place of living and initial symptoms. This is essentially a list of differential diagnoses. Think about pros and cons of each possibility.
- Now ask details of the present and past history focused on the initial diagnostic hypothesis. For example-in a patient with bleeding P/R at age 40. If you have consider piles and cancer rectum as your diagnostic hypothesis, your interrogation should revolve around these two conditions with the objective of proving one and refuting the other.
- After interrogation revise your diagnostic hypothesis(e) on the basis of historical facts.
- Perform a quick general exam and make a note of overall health status.
- The next step is to carry out a detailed physical exam of the lump, swelling or ulcer.
- Remember no exam of a swelling or ulcer is complete without checking the draining lymph nodes.
- Make a diagrammatic representation of your findings with colour felt pens on your diary/log book.
- Go through the following checklist while seeing any lump: number, site, size, shape, margin, surface, skin over it, structures superficial and deep to it, temperature over it, tenderness, consistency, transillumination, thrill or bruit and the regional nodes.
- Once again revise your diagnostic hypothesis. Generate a diagnostic workup plan (Diagnostic decisions)

Objectives of Clinical Training

At the end of clinical posting in surgery, a student should be able to:

- Elicit a detailed & relevant history
- Carry out a physical examination
- Identify patients' problems
- Reach a differential diagnosis
- Formulate appropriate investigations
- Interpret the results of investigations
- Plan appropriate management
- Undertake some aspects of management
- Demonstrate adequate communication skills

TEXTBOOKS RECOMMENDED

- (1) Short Practice of surgery- Bailey & Love
- (2) ASI Text book of surgery Ed.A.K. HAI
- (3) An introduction to the symptoms and signs of surgical Disease-Norman L. Browse
- (4) Hamilton Bailey's Physical Signs in Surgery.
- (5) Principles and Practice of Surgery Eds-Garden, Bradbury Forsythe.
- (6) Pye's Surgical Handicraft.

ASSESSMENT AND EXAMINATION

THEORY INTERNAL:

Total. 30 marks

Internal test 1. (45 marks). At the End of semester 7 /begining of semester 8.

Course included Semester 6th+7th

Internal test -2. (45 marks) one month prior to preliminary examination

Course included semester 8th+9th

(Ortho internal (30marks))

Total. (Internal 1 +internal2 + ortho internal). - 120 marks

Weightage. Total 15 marks. (120/8)

Preliminary examination as per university style

Total. 120 marks

Two papers Each paper of 60 marks

Paper -1

Section -A. General surgery. (30 marks)

Section B. Ortho. (30 marks)

Paper-2

SectionA. GIT. (30marks)

SectionB. GUT. (30marks)

Total preliminary internal 15.(120/8)

Total Theory internal. (15+15=30marks)

PRACTICAL INTERNAL

Total. 30marks

Ward ending examination will be carry out in each clinical posting Except. Introductory and revision terms

Total. 90 marks

Clinical assessment. - 60 marks

Attendance--- 15 marks

Case presentation Records. -15 marks

Average of all ward examination. Out of (90marks)

Orthopaedic. Ward examination. -30 marks

Total 120 marks

Internal 15 marks (120/8)

Practical preliminary as university style (90+30=120 marks)

Surgery. 90 marks

Long case- 50

Short case- 25

Table viva -15

Ortho 30 marks

Case. 25

Table viva. 05

Total 120 marks

Internal 15 marks out of 120 (120/8)