

# GENERAL SURGERY

## Objectives

At the end of the course, the learners shall be able to

1. Diagnose and appropriately manage common surgical ailments in a given situation.
2. Identify situations calling for urgent or early surgical intervention and refer at the optimum time to the appropriate centers.
3. Provide adequate preoperative, post-operative and follow-up care of surgical patients.
4. Counsel and guide patients and relatives regarding need, implications and problems of surgery in the individual patient
5. Provide emergency resuscitative measures in acute surgical situations including trauma. Should be well versed with BLS & ITLS.
6. Organise and conduct relief measures in situations of mass casualties.
7. Effectively participate in the National Health Programmes especially the Family Welfare Programme.
8. Discharge effectively medico-legal and ethical responsibilities
9. Perform simple surgical procedures.

## KNOWLEDGE

### System Based

Subject	Must know	Desirable to know
Wound healing	✓	
Asepsis, antisepsis, sterilization and universal precaution	✓	
Surgical knots, sutures, drains, bandages and splints.	✓	
Surgical infections, causes of infections, prevention common organisms causing infection.	✓	
Tetanus, gas gangrene treatment & prevention	✓	
Chronic specific infections TB, Filariasis	✓	
Boils, cellulites, abscess, narcotizing fasciitis.	✓	
Antibiotic therapy	✓	
Hospital infection	✓	
AIDS and Hepatitis.	✓	
Fluid and electrolyte balance.	✓	
Shock, etiology, pathophysiology and management	✓	
Blood transfusion indication and hazards	✓	
Common preoperative preparation and postoperative complication	✓	
Surgical aspects of diabetes mellitus	✓	
Bites and stings	✓	

Subject	Must know	Desirable to know
Mechanisms and management of missile, blast and gunshot injuries		✓
Organ transplantation: Basic Principles		✓
Nutritional support to surgical patients		✓
Common skin and subcutaneous condition	✓	
Sinus and fistulae, pressure sores	✓	
Acute arterial occlusion, diagnosis and initiate management.	✓	
Types of gangrene, Burgers disease and atherosclerosis	✓	
Investigations in case of arterial obstruction, amputation, vascular injuries basic principles and management		✓
Venous disorders: Varicose veins	✓	
Diagnosis, principles of therapy, prevention, of DVT.	✓	
Investigations in case of arterial obstruction, amputation, vascular injuries basic principles and management		✓
Lymphatic: Diagnosis and principles of management of lymphangitis and lymphedema	✓	
Surgical management of Filariasis.		✓
Burns: causes, prevention and management	✓	
Wounds of scalp and its management	✓	
Recognition , diagnosis and monitoring of patients with head injury, Glasgow coma scale	✓	
Recognition of acute cerebral compression, indication for referrals.	✓	
Cleft lip and palate		✓
Leukoplakia, retention cysts, ulcers of tongue.	✓	
Oral malignancies	✓	
Salivary gland neoplasms	✓	
Branchial cyst, cystic hygroma		✓
Cervical lymphadenitis nonspecific and tuberculous, Metastatic lymph nodes and lymphomas.	✓	
Diagnosis and principles of management of goitre	✓	
Thyroglossal cyst and fistula	✓	
Thyroididitis		✓
Thyrotoxicosis	✓	
Thyroid neoplasms		✓
Management of solitary thyroid nodule	✓	
Thoracic outlet syndrome		✓
Management of nipple discharge	✓	
Breast abscess	✓	
Clinical breast examination, breast self examination	✓	

Subject	Must know	Desirable to know
Screening and investigation of breast lump	✓	
Cancer breast diagnosis, staging and principles of management	✓	
Recognition and treatment of pneumothorax, haemothorax	✓	
Pulmonary embolism: prevention/recognition and treatment	✓	
Flail chest, stove in chest.	✓	
Postoperative pulmonary complication.	✓	
Empyema thoracis	✓	
Recognition of oesophageal atresia and principles of management	✓	
Neoplasms of the lung		✓
Cancer oesophagus: principles of management		✓
Congenital hypertrophic pyloric stenosis	✓	
Aetiopathogenesis, diagnosis and management of; peptic ulcer	✓	
Cancer stomach		✓
Signs and tests of liver function	✓	
Amoebic liver abscess	✓	
Hydatid cyst	✓	
Portal hypertension		✓
Obstructive jaundice	✓	
Neoplasms of liver		✓
Rupture spleen		✓
Indications for splenectomy		✓
Clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis	✓	
Carcinoma gall bladder		✓
Choledochal cyst		✓
Acute pancreatitis	✓	
Chronic pancreatitis		✓
Carcinoma pancreas		✓
Peritonitis: causes, recognition, diagnosis, complications and principles of management	✓	
Tuberculous peritonitis	✓	
Abdominal pain types and causes	✓	
Intestinal amoebiasis	✓	
Tuberculosis of intestine	✓	
Ulcerative colitis		✓
Carcinoma colon		✓
Intestinal obstruction	✓	

Subject	Must know	Desirable to know
Appendix: Diagnosis and management of acute appendicitis	✓	
Appendicular lump and abscess	✓	
Clinical features of the rectal diseases	✓	
Rectum: Carcinoma rectum	✓	
Principles of management of colostomy	✓	
Anal Canal: Surgical anatomy, features and management of fissures, fistula in ano	✓	
Perianal and ischiorectal abscess	✓	
Haemorrhoids	✓	
Anorectal anomalies	✓	
Congenital megacolon		✓
Clinical features, diagnosis, complication and principles of management of inguinal hernia	✓	
Umbilical, femoral hernia and epigastric hernia	✓	
Premalignant conditions of large bowel		✓
Carcinoma rectum		✓
Prolapse of rectum		✓
Anal carcinoma	✓	
Urinary symptoms and investigations of urinary tract	✓	
Diagnosis and principles of management of urolithiasis	✓	
Hydronephrosis		✓
Pyonephrosis, perinephric abscess		✓
Renal tuberculosis	✓	
Renal tumors		✓
Lower Urinary tract symptoms or prostatism	✓	
Benign prostatic hyperplasia; diagnosis and management.	✓	
Carcinoma prostate		✓
Genital tuberculosis in male	✓	
Phimosis and paraphimosis	✓	
Carcinoma penis		✓
Diagnosis and principles of treatment of undescended testis	✓	
Torsion testis	✓	
Hydrocele, haematocele and pyocele	✓	
Varicocele.		✓
Acute and chronic epididymo-orchitis	✓	
Testicular tumours.		✓
Principles of management of Urethral injuries	✓	

## Symptoms based

(Preferably learnt during IX semester) Approach to the patient with

Symptom	Must know	Desirable to know
Ulcers in oral cavity	✓	
Solitary nodule of the thyroid	✓	
Lymph node in the neck	✓	
Suspected breast lump	✓	
Acute abdominal pain	✓	
Dysphagia	✓	
Chronic abdominal pain	✓	
Epigastric mass	✓	
Right hypochondrium mass	✓	
Right iliac fossa mass	✓	
Renal mass	✓	
Inguino-scrotal swelling	✓	
Scrotal swelling	✓	
Gastric outlet obstruction	✓	
Upper gastrointestinal bleeding	✓	
Lower gastrointestinal bleeding	✓	
Anorectal symptoms	✓	
Acute intestinal obstruction	✓	
Obstructive jaundice	✓	
Acute retention of Urine	✓	
Bladder outlet obstruction	✓	
Haematuria	✓	
Peripheral vascular disease	✓	
Varicose veins	✓	
New borne with developmental anomalies	✓	

## SKILLS

### Objectives

1. Obtain a proper relevant history, and perform a humane and thorough clinical examination including internal examinations (per-rectal and per vaginal) and examinations of all organs/systems in adults and children
2. Arrive at a logical working diagnosis after clinical examination
3. Order appropriate investigations keeping in mind their relevance (need based) and cost effectiveness.

5. Write a complete case record with all necessary details.
6. Write a proper discharge summary with all relevant information
7. Obtain informed consent for any examination/procedure

At the end of the learners should be able to perform:

Skill	Perform independently	Perform under supervision	Assist the expert	Observe
Start IV lines and monitor infusions	✓			
Start and monitor blood transfusion.	✓			
Venous cut-down	✓			
Manage a C.V.P. line	✓			
Conduct CPR (Cardiopulmonary resuscitation)	✓			
Basic life support /ITLS	✓			
Endotracheal intubation	✓			
Pass nasogastric tube	✓			
Perform digital rectal examination and proctoscopy	✓			
Urethral catheterisation	✓			
Dressing of the wounds	✓			
Suturing of the simple wounds	✓			
Remove small subcutaneous swellings		✓		
Various types of biopsies		✓		
Relieve pneumothorax		✓		
Infiltration, surface and digital Nerve blocks		✓		
Incise and drain superficial abscesses		✓		
Manage Lacerated wounds		✓		
Control external hemorrhage		✓		
Vasectomy			✓	
Circumcision			✓	
Surgery for hydrocele			✓	
Surgery for hernia			✓	
Injection/banding of piles			✓	
Management of shock			✓	
1. Assessment and management of burns			✓	
All the operations performed by surgeons during surgical posting during general surgical postings				✓

Skills to be learnt initially on the models and later on performed under supervision before performing independently, provision of **surgical skills laboratories** in the Medical Colleges will facilitate this process

## **Teaching learning methods:**

Structured interactive sessions

Small group discussions

Self learning tools like

- (a) Assignments
- (b) Problem based learning
- (c) Written case scenarios
- (d) Simulated patient management problems,

in addition to routine classroom and bedside teaching

## **Learning resource materials**

Text books, Internet, CDs, Videos, Skill laboratories etc.

## **Suggested text Books**

Bailey and love Short practice of Surgery

A manual of clinical Surgery by S Das

Hamilton Bailey's demonstration of clinical signs

Pye's Surgical Handicraft

**Suggested topics for e-learning** : *All the topics included in symptom based learning*

1. Ulcers in oral cavity
2. Solitary nodule of the thyroid
3. Lymph node in the neck
4. Suspected breast lump
5. Acute abdominal pain
6. Dysphagia
7. Chronic abdominal pain
8. Epigastric mass
9. Right hypochondrium mass
10. Right iliac fossa mass
11. Renal mass
12. Inguino-scrotal swelling
13. Scrotal swelling
14. Gastric outlet obstruction
15. Upper gastrointestinal bleeding
16. Lower gastrointestinal bleeding
17. Anorectal symptoms
18. Acute intestinal obstruction
19. Obstructive jaundice
20. Acute retention of Urine
21. Bladder outlet obstruction
22. Haematuria
23. Peripheral vascular disease
24. Varicose veins
25. New borne with developmental anomalies