

Surgery Curriculum and Information for Students



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Introduction

This book comes as a joint effort of the Academic staff of the Department of Surgery at the Faculty of Medicine, University of Peradeniya and the extended staff of the Teaching Hospital, Kandy.

This booklet is a guide to what areas in surgery you need to get acquainted with during the surgical training.

“Learning surgery is best done by living in the surgical wards and becoming a part of the surgical team, carrying responsibility and giving of your time, knowledge and energy towards the welfare of the patient. This kind of commitment though not quantified in a list of objectives such as this, is probably the key to learning surgery and savouring the incomparable sense of achievement and fulfillment that surgery can give.”

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1993

Curriculum of Surgical Teaching/Learning and Training, Faculty of Medicine, University of Peradeniya

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Introduction and Theme

Introduction

The subject of surgery is taught, starting from the second year and consists of lectures, tutorials, clinical rotations, regular assessments followed by the final assessment at the end of the course, as part of the Final MBBS examination.

Theme

Students are encouraged to learn the subject of surgery with an emphasis on self directed learning, using common sense, hard working, independent and rational thinking.

Major areas of study

1. Basic principles of surgery
2. Surgical emergencies
3. Routine surgical cases
 - i. Major
 - ii. Minor
4. Diagnostic procedures
5. Preoperative and postoperative care
6. Awareness of operating theatre functions, to observe some common surgical procedures, learn to assist at surgery and to see at first hand, pathological lesions in their natural setting.
7. Understand the role of surgical services to the community
8. The role of surgical audit in improving the quality of care

Clinical Training

Surgical appointments

These appointments are held in Teaching Hospitals Kandy & Peradeniya; Sirimavo Bandaranaike Specialized Hospital for Children; Base Hospitals of Gampola, Mawanella; Distric General Hospitals of Kegalle and Matale.

Appointment	Duration
Introductory appointment	4 weeks (shared with three other major disciplines)
MSGOP appointment	4 weeks in General Surgery
Short appointments in	
• Otolaryngology	2 weeks
• Ophthalmology	2 weeks
• Orthopaedics	2 weeks
• Radiology	2 weeks
• Anaesthesiology	4 weeks
• Urology/Neurosurgery/Oncosurgery/Oncology	4 weeks (one week in each)
MS appointment (General Surgery)	12 weeks (done as 2 appointments, each being 6 weeks)
Professorial Surgical appointment	8 weeks

Overview on General surgical appointments

Introduction

There will be 24 weeks of rotation in general surgery. This consists of 4 weeks in MSGOP, 12 weeks of MS (I&II) and 8 weeks of Professorial appointment. During the surgical appointments learners are expected to have clerked patients with common surgical diseases indicated in the syllabus.

At the end of the surgical appointments the learners should be able to

1. Take a full history and do a complete physical examination.
2. Identify the problems, based on clinical findings.
3. Formulate a comprehensive summary of the clinical evaluation.
4. Analyze the clinical findings and arrive at a differential diagnosis/diagnosis
5. Plan and execute (under supervision) appropriate tests and bed side examinations.
6. Propose a management plan for the patient and execute the same under supervision.
7. Demonstrate thorough theory knowledge on the common surgical conditions listed in the booklet.
8. Apply the theory knowledge to the care of patient management.
9. Carry out emergency management, pending help.

Action Plan for achieving the above objectives.

It is highly desirable for students to achieve the above objectives as early as possible so that students can become competent prior to the final year. Final year is meant for fine tuning and preparing students to become a practical doctor. In the process of clinical learning learners go through four stages of maturation; initially as a reporter, then an interpreter, next a manager (acting on the clinical diagnosis and making executive decisions) and finally, an educator (who have gained a deep knowledge and are able to teach their colleagues). It is expected for students to achieve excellence in above four aspects.

Reading during the clinical rotation

Learners will read around the patients they clerk and also clerked by others. The reading should be holistically on the surgical problem that the patient is suffering from, including the pathology and the management of the particular surgical disease.

I. MSGOP Appointment

This will be the first proper surgical appointment and will run over a period of 4 weeks. Clinical learning will take place only in the morning sessions; afternoons are used for lectures in Y3 modules. Learners have already been trained to take a history and do a complete physical examination of all the systems during the introductory appointment. The main goal of this appointment is to practice correctly the history taking and physical examination of all the systems, in full.

At the end of the appointment learners should be able to

- Report accurately the findings of the history and physical examination.
- Identify the clinical problems, based on the history and physical examination.
(In many of the conditions mentioned in the topic list)

II. MS I Appointment

At the end of the appointment learners should be able to

1. Interpret the clinical findings and arrive at a diagnosis or differential diagnosis
2. Prepare a management plan
3. Demonstrate sufficient knowledge on the surgical procedures.

(In many of the conditions mentioned in the topic list)

III. MS II Appointment

At the end of the appointment learners should be able to carry out under supervision the management plan, including the procedures (eg venepuncture, insertion of NG tubes, catheterization, etc) in many of the conditions mentioned in the topic list.

IV. Professorial Appointment

At the end of the appointment learners should be able to

1. apply the knowledge to critically analyze the patient as a whole
2. formulate a plan to educate fellow students and the patient.

(In all of the conditions mentioned in the topic list)

List of Subject topics

- **BASIC PRINCIPLES OF SURGERY**

1. Diagnosis and the management of shock
2. Analgesic therapy
3. Asepsis/antiseptics/sterilization/operating theatre sterility
4. Fluid and electrolyte balance
5. Surgical Nutrition
6. Antibiotics/Use and abuse/Drug resistance
7. Blood transfusions
8. Surgical infections
9. Cancer, Premalignant lesions/Early diagnosis/Principles of treatment
10. Surgical audit
11. Transplantation
12. Commonly used surgical instruments
13. Basic surgical skills (Suture material, needles, suturing techniques)
14. Surgical haemostasis
15. Minimally invasive surgery
16. Day case surgery
17. Recent advances in surgery

- **EMERGENCY SURGERY**

- A. Essentials**

1. The care of multiply injured patient
2. Cardiopulmonary resuscitation (CPR)
3. First Aid
4. Disaster management
5. Care of wounds

- **EMERGENCY SURGERY I**

- Trauma**

1. Head injuries
 - Faciomaxillary injuries
 - Spinal injuries
2. Chest injury – Penetrating / Blunt
3. Abdominal injury - Penetrating / Blunt with specific organ injury
4. Vascular injury
5. Nerve injury
6. Muscle and tendon injury
7. Skin and soft tissue injury/Contusion / Laceration
8. Fractures/Dislocation – Mechanisms/Reduction and Principles of immobilization
9. Complications of close and open fractures
10. Burns – Scalds / Flame/ Electrical /Corrosive
11. High velocity missile/Blast injury

- **EMERGENCY SURGERY II**

- Infections with surgical considerations**

1. Tetanus
2. Gas gangrene
3. Rabies
4. Hepatitis B,C,D, non A-E/AIDS
5. Synergistic gangrene
6. Tuberculosis
7. Actinomycosis

8. Erysipelas / Erysipeloid
9. Cellulitis
10. Lymphangitis/Lymphadenitis
11. Bacteraemia/Septicaemia/Pyaemia
12. Abscess
13. Antibiooma
14. MRSA infection

○ **EMERGENCY SURGERY III**

The Acute Abdomen

Inflammatory:

Appendicitis

Cholecystitis

Pancreatitis

Enteritis Necroticans

Meckel's Diverticulitis

Diverticulitis

Liver abscess

Salpingitis/Tubo Ovarian mass

Obstructive:

Strangulated hernia

Bands and adhesions

Volvulus – Small and large bowel

Intussusception – Small and large bowel

Bolus obstruction

Peritonitis (Generalized/Localized): Perforation

DU/GU/CaAppendix

Typhoid

Colitis

Uterus

Meckel's

.Strangulated Obstruction

.Ruptured inflamed viscus

.Bleeding into an Ectopic Pregnancy

Mesenteric infarction

Leaking/dissecting abdominal aneurysm

○ **EMERGENCY SURGERY IV**

Other

- | | |
|---|---|
| <p>1. Renal
Ureteric colic
Retention of Urine</p> | <p>2. Thoracic
Lung abscess
Empyema
FB in bronchus</p> |
| <p>3. GIT
Haematemesis and Malaena
Foreign bodies in GIT</p> | <p>4. Vascular
Embolism – Arterial
Acute DVT* and PE*
Thrombophlebitis</p> |
| <p>5. Skin and soft tissues
Thorn prick
Animal bites/Snake bites
FB in tissues
Abscess
Nail bed sepsis
Diabetic foot
Infected sebaceous cyst
Carbuncle</p> | <p>6. Muscles and Ligaments
Haematoma
Intramuscular abscess
Tennis elbow
Tendinitis
Painful arc syndrome
Painful heel syndrome</p> |
| <p>7. Nerves
Entrapment syndromes
Causalgia</p> | <p>8. Bones
Acute osteomyelitis
Brodie's abscess
Septic arthritis</p> |
| <p>9. Dental
Toothache
Apical abscess/Periapical abscess/Dentoalveolar abscess</p> | |

*DVT – Deep Vein Thrombosis

*PE – Pulmonary Embolism

- **BREAST SURGERY**

1. Disorders of Breast

- 1.1 *Benign breast disease*

1. Duct papilloma
 2. Duct ectasia syndrome
 3. Plasma cell mastitis, mamillary fistulae
 4. Fibroadenoma - Hard/Soft
 5. Phylloides tumour
 6. Galactocoele
 7. Mastitis – Acute/Chronic breast abscess/Antibioma
 8. Traumatic fat necrosis
 9. Male gynaecomastia
 10. Chronic interstitial mastitis

- 1.2 *Disorders of Nipples*

1. Accessory nipples
 2. Inverted nipples
 3. Eczema of nipples
 4. Scabies of nipples

- 1.3 *Malignancy*

1. Paget's disease of breast

2. Other areas

1. Breast augmentation
 2. Breast reconstruction
 3. Procedures and investigations done for diagnosis of breast diseases

- **ENDOCRINE SURGERY**

Surgical Disorders of the THYROID

1. Lingual thyroid
2. Thyroglossal cyst, fistula and complications
3. Endemic goitre
 - a. Simple diffuse enlargement
 - b. Multinodular enlargement
4. Hyperthyroidism
 - a. Primary – Grave’s disease
 - b. Secondary – To endemic goitre
 - Thyroiditis
 - Autonomous nodule
 - Grave’s on endemic
5. Thyroiditis – Hashimoto’s/ Reidle’s / De Quervain’s
6. Carcinoma of the thyroid – Papillary / Follicular / Medullary / Anaplastic
7. Hypothyroidism
8. Thyroid emergencies
9. Thyroid surgery and complications
10. Investigations of thyroid diseases including isotope scans
11. Multiple endocrine neoplasia

Surgical disorders of the PARATHYROID

1. Hyperparathyroidism
2. Surgical hypoparathyroidism

Disorders of the ADRENALS

1. Cushing’s disease / syndrome
2. Conn’s syndrome
3. Pheochromocytoma
4. Insulinoma
5. Neuroblastoma
6. Adrenal crisis

PANCREAS

1. Insulinoma

Patient preparation for above endocrine surgeries should be studied.

- **ABDOMINAL WALL**

1. Epigastric hernia
2. Exomphalos / Gastroschisis
3. Ectopia vesicae
4. Diaphragmatic hernia
5. Divarication of Recti
6. Inguinal hernia
7. Femoral hernia
8. Umbilical hernia
9. Paraumbilical hernia
10. Incisional hernia
11. Rare hernia
12. Obstructed and strangulated hernia
13. Diseases of the umbilicus
14. Burst abdomen

- **GASTROENTEROLOGICAL SURGERY I (*OROMAXILLOFACIAL SURGERY*)**

1. Cleft palate and lip
2. Submandibular duct calculus
3. Parotitis – Acute/Chronic
4. Tumours of the salivary glands
5. Leukoplakia of the oral cavity
6. Carcinoma of the oral cavity (Including tongue)

- **GASTROENTEROLOGICAL SURGERY II (*OESOPHAGUS & GASTRODUODENUM*)**

1. Tricho-oesophageal fistula
2. Congenital pyloric stenosis
3. Hiatus hernia/Reflux oesophagitis and complications
4. Benign stricture of the oesophagus
5. Plummer Vinson syndrome
6. Carcinoma of the oesophagus
7. Motility disorders of the oesophagus
8. Achalasia cardia
9. Gastric and Duodenal ulcers and complications
10. Carcinoma of the stomach
11. Haematemesis and malaena
12. Radiological investigations and endoscopic procedures in diagnosing UGI diseases

- **GASTROENTEROLOGICAL SURGERY III (SMALL BOWEL)**

1. Atresia of small bowel / Malrotation
2. Enteritis necroticans
3. Crohn's ileitis
4. TB of the small intestine
5. Meckel's diverticulitis
6. Volvulus of small bowel
7. Strangulated/Obstructed hernia
8. Patent Vitelo intestinal duct
9. Trauma to small bowel - Penetrating / Blunt
10. Tumours of the small intestine

- **GASTROENTEROLOGICAL SURGERY IV (LARGE BOWEL)**

1. Hirshsprung's disease
2. Trauma to colon
3. Appendicitis and complications
4. Amoebic/Ulcerative/Crohn's colitis
5. Spastic colon/Diverticular disease
6. Polyps and Polyposis of the colon
7. Tuberculosis of colon
8. Carcinoma of Colon/Rectum and Anal canal
9. Intussusceptions – Caecocolic /Colocolic
10. Volvulus – Sigmoid colon

Other areas in gastroenterological surgery iii and iv

1. Stoma and stoma care
2. Diagnostic procedures

- **GASTROENTEROLOGICAL SURGERY V (ANORECTAL CONDITIONS)**

1. Imperforate anus
2. Haemorrhoids
3. Fistula in ano
4. Perianal abscess
5. Ischiorectal abscess
6. Fissure in ano
7. Perianal haematoma
8. Pruritus anii
9. Rectal prolapse – Mucosal / Total
10. Rectal injury
11. Proctitis
12. Anal incontinence
13. Diagnostic procedures

- **BILIARY TRACT**

1. Biliary atresia/ Choledochal cyst
2. Biliary colic/ mucocoele of GB
3. Cholecystitis- Acute/ Chronic, and complications
4. Obstructive jaundice
5. Acute cholangitis
6. Tumours of the biliary tract
7. Diagnostic procedures for diseases of the gall bladder and biliary tract

- **PANCREAS**

1. Trauma to pancreas
2. acute pancreatitis
3. Chronic pancreatitis
4. Carcinoma of the pancreas
5. Congenital abnormalities
6. Diagnostic procedures for diseases of the pancreas

- **LIVER**

1. Trauma to the liver
2. Neoplasms of the liver- primary/secondary
3. Liver abscess- amoebic/pyogenic
4. Portal hypertension/ porto-systemic encephalopathy
5. Hepatocellular failure and hepatorenal syndrome
6. Basics of liver transplantation

- **SPLEEN**

1. Trauma to spleen (Rupture/Delayed Rupture)
2. Splenectomy for non traumatic conditions
3. ITP- Idiopathic thrombocytopaenic purpura

- **VASCULAR SURGERY**

1. Acute arterial embolism
2. Arterial trauma
3. Chronic occlusive arterial disease
 - a. Atherosclerosis
 - b. Thrombangitis obliterans
 - c. Vasculitides
4. Aortic and peripheral aneurysms
5. Haemangiomas
6. Arteriovenous fistulae
7. Venous anomalies
8. Varicose veins
9. Deep vein thrombosis/postphlebitic limb/pulmonary embolism
10. Lymphoedema
11. Gangrene
12. Venous ulcers
13. Amputation
14. Diagnostic procedures in arterial and venous diseases

- **NEUROSURGERY**

1. Hydrocephalus/ meningocoele/ meningomyelocoele
2. Head injury
 - 3.1 Fractures of the skull (simple and compound) vault and base
 - 3.2 Intracranial haematoma- Extradural, subdural and intracerebral
 - 3.3 Post concussional syndrome/ rehabilitation
3. Cerebral abscess/ Meningitis
4. Intracranial aneurysms and subarachnoid haemorrhage
5. Intracranial tumours- Meningiomas/ Gliomas/ Secondary deposits/ Pituitary adenoma/
Acoustic neuroma/ Cerebellar tumours
6. Spinal cord and root compression
 - 6.1 Spinal injuries (including initial and subsequent management)
 - 6.2 Cervical and lumbar spondylosis and disc disease (including sciatica)
 - 6.3 Other causes of spinal cord compression- Neoplasms/ cysts
7. Peripheral nerve entrapment syndromes
 - 6.1 Carpal Tunnel Syndrome
 - 6.2 Meralgia paraesthetica
 - 6.3 Thoracic inlet syndrome
8. Peripheral nerve injuries
9. Surgical management of pain

• THORACIC SURGERY

EMERGENCIES

1. Diaphragmatic herniae
2. Injuries- blunt/ penetrating/ blast
 - Fracture ribs/ flail chest
 - Pneumothorax- open/ close/ tension
 - Haemothorax
 - Lung contusion
 - Diaphragmatic
3. Foreign bodies in bronchus
4. Cardiac injury/ tamponade

ROUTINE

1. Pleural/ pericardial effusions
2. Surgical intervention in inflammatory lung disease (including lung abscess)
3. Bronchial carcinoma
4. Surgical considerations in congenital and acquired heart diseases
5. Surgical considerations in ischaemic heart disease
6. Cysts and tumours of the mediastinum

• ORTHOPAEDIC SURGERY AND TRAUMA

TRAUMA

1. Causation and diagnosis of fractures
2. Complications of fractures
3. Principles of management (includes simple and compound fractures)
4. Indications for internal fixation of fractures
5. Causation and initial management of spinal injuries
6. Tendon injuries of the hand- Diagnosis
7. Pathological fractures- Causes
8. Problems involved with neglected trauma of the musculoskeletal system
9. First aid in fractures

ORTHOPAEDIC SURGERY

CHILDREN

1. Detection and diagnosis of congenital deformities
e.g.
 1. Congenital dislocation of hip
 2. Congenital talipes equino varus
2. Differential diagnosis of
 1. Knock knees, bow legs (genu valgus and varus)
 2. Cubitus valgus and varus
 3. Painful lesions of hip joint
4. Problems associated with walking- delayed walking and toe walking

GENERAL

1. Acute and chronic osteomyelitis- Diagnosis and treatment
2. Tuberculosis of Bone and Joint- Diagnosis and treatment
3. Common bone tumours
4. Detection of scoliosis and kyphosis of the spine
5. *POP's and traction devices*
Various types and their purposes
Identify problems and emergencies associated with POP casts

ADULT

1. Differential diagnosis of
 - Low back pain
 - Pain in the region of cervical spine
2. Diagnosis of common orthopaedic conditions around
 - Shoulder joint
 - Knee joint
3. Differential diagnosis of a limp
4. Diagnosis of common orthopaedic conditions such as,
 - Carpal Tunnel Syndrome
 - Trigger finger
 - De Quervain's tenosynovitis
 - Tardy ulnar nerve palsy
 - Mallet finger
 - Claw hand
 - Tennis elbow
5. Injuries at sport

- **UROLOGICAL SURGERY I**

1. Unascended kidney/ solitary kidney/ malrotated kidneys- (hypoplastic/ agenesis)
2. Horse-shoe kidney, polycystic kidney, solitary cyst
3. Pelviureteric junction obstruction- congenital/ acquired
4. Ectopic ureter/ duplex system/ ureterocoel
5. Renal stone
6. Renal TB
7. Renal tumours
 - Nephroblastoma
 - Renal carcinoma
 - Renal pelvis and ureteric tumours
8. Acute renal failure
9. Chronic renal failure
10. Ureteric stone
11. Vesicoureteric reflux
12. Renal transplantation
13. Pyelonephritis
14. Differential diagnosis and systematic evaluation of a patient with haematuria
15. Emergency and subsequent management of traumatic injuries to urethra, bladder and kidneys
16. Patient preparation for radiological procedures in urology, and for urosurgical procedures

- **UROLOGICAL SURGERY II**

1. Phimosis/ paraphimosis/ circumcision
2. Preputial and urethral warts/ ulceration/ balanoposthitis
3. Meatal stenosis
4. Urethral strictures/ periurethral abscess
5. Hypospadias/ epispadias
6. Posterior urethral valves
7. Benign enlargement of the prostate
8. Prostatic carcinoma
9. Bladder stone
10. Bladder tumour
11. Bladder diverticuli
12. Bladder infections (including TB)
13. Acute/ chronic retention of urine
14. Incontinence of urine
15. Vesico-vaginal fistula
16. Vesico-intestinal fistula
17. Urethral caruncle
18. Neuropathic bladder
19. Prostatitis

- **UROLOGICAL SURGERY III**

TESTICLE

1. Undescended- incomplete descent/ ectopic testicle
2. Trauma to testicle
3. Torsion of testis/ of the appendix of testis
4. Atrophic testes/ infertility/ vasectomy
5. Epididymoorchitis- acute/ chronic
6. Testicular tumours
7. Spermatocoel
8. Varicocoele
9. Hydrocoele- primary/ secondary

- **PREOPERATIVE AND POSTOPERATIVE CARE**

1. Premedication/ Analgesia
2. Monitoring
3. Fluid and Electrolyte balance
4. Surgical nutritional problems
5. Respiratory problems
6. Haemorrhage/ resuscitation
7. Wound care
8. Infections/ Cross infections/ Isolation
9. Antibiotics (therapeutic principles of)
10. The medically handicapped patient ↑BP, IHD, Diabetic, Chronic Obstructive Airways disease
11. Management of drains
12. Care of the critically ill
13. Organ system failure- cardiac, renal, hepatic, pulmonary
 - Managing
 - NG tubes/ T- tubes
 - Indwelling urethral catheters
 - Tracheostomy tubes/ endotracheal tubes
 - Colostomy/ ileostomy/ jejunostomy/ gastrostomy
 - Amputees/ prosthesis

PRACTICAL PROCEDURES

PRACTICAL PROCEDURES YOU SHOULD DO

BASIC CARE

Thermometry
Administering injections ID/ SC/ IM/ IV
IV cannulation
Setting up a drip
Cut down
Wound excision and toilet
Wound suturing
Removing sutures
Dressing an ulcer
Incise an abscess
Scrub up and assist
Airway/ suction
Endo tracheal intubation
Cardiopulmonary resuscitation

Splinting
Bandaging
Including — limb
 Scrotal
 Head
NG tube insertion and management
Enema and types
Proctoscopy
Aspirating a pleural effusion
Catheterization of a bladder
Lumbar puncture
Cross-matching blood
Transfusing blood

Students will be provided with a booklet containing the procedures to be done, that has to be signed by the supervising officer and countersigned by the consultant.

OTHER AREAS TO BE INFORMED ABOUT

- 1) Filling in request forms for diagnostic procedures
- 2) Writing diagnosis cards
- 3) Pathology specimen collection for histology and processing
- 4) Sterilization of instruments / skin/ clothes/ rubber items/ glass and metal items
- 5) Biopsy/ Fine Needle Aspiration Cytology

Drill to follow in case of needle prick injuries to health staff, or contamination with suspicious body fluids

PROCEDURES TO BE CONVERSENT WITH

Should know- indication for procedure
Technical details
Possible complications
Specific post-procedure management

RESPIRATORY

Direct laryngoscopy
Indirect laryngoscopy
Tracheostomy and management
Insertion of IC tube and management
Postural drainage
Steam inhalation
Nebulizing
Bronchoscopy and biopsy
Nasotracheal suction
Ventilation
Lung Biopsy
Blood gases/ oximetry

UROLOGICAL

Catheter care
IV urography
Micturition
cystourethrography
Cystoscopy
Retrograde ureteric catheterization
Ultrasound examination of GUT
Renal Biopsy
Lithotripsy

CARDIOVASCULAR

Angiography
Venography
Varicose vein sclerotherapy
CVP lines and monitoring
Intracardiac needling
Pericardial aspiration
Limb pressure profiles by ultrasound

HEPATOBIILIARY

Cholecystography
T-tube management
ERCP
Ultrasound scanning of hepatobiliary system
PTC
Liver Biopsy

ORTHOPAEDIC

POP application and management
Cutting POP's off
Management of T Splints
Internal fixation- hip, forearm bones, femur, tibia
Drilling for osteomyelitis/ sequestrectomy
Traction- skull calipers, skin traction, *skeletal traction*
Muscle Biopsy
Nerve Biopsy
Skin Biopsy

GI TRACT

Oesophagoscopy and Biopsy- Rigid/ Flexible
Oesophagoscopy and sclerotherapy for varices
Gastroduodenoscopy
Barium swallow
Barium meal and screening
Injection of haemorrhoids
Sigmoidoscopy
Colonoscopy
Amputation
Stomach wash
Flatus tube

SKILLS TRAINING

The following skills will be taught in the skills laboratory.

BASIC CARE

First Aid

Administering injections ID/ SC/ IM/ IV

IV cannulation

Setting up a drip

Cut down

Tying a knot

Wound suturing

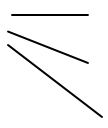
Removing sutures

Dressing an ulcer

Scrub up and assist

Biopsy/ Fine Needle Aspiration Cytology

Bandaging

Including  Limb
Scrotal
Head

Splinting

Airway/ suction

NG tube insertion and management

Enema and types

Proctoscopy

Catheterization of a bladder

Writing diagnosis cards

Filling in request forms for
diagnostic procedures

COMMON ROUTINE SURGICAL CASES

1. Lymph node enlargement
2. Goiter/Thyrotoxicosis
3. Mass in Breast
4. Empyema/Pleural effusion
5. Dysphagia
6. Upper abdominal discomfort/Pain
7. Vomiting/Loss of appetite/Epigastric mass
8. Right Hypochondrial pain/mass
9. Obstructive jaundice
10. RIF Mass
11. Colonic mass/Rectal mass/Bleeding PR/alteration of bowel habits
12. Haematuria
13. Prostatism
14. Para umbilical/Incisional Herniae
15. Deep vein thrombosis/Postphlebitic limb
16. Varicose veins
17. Lymphoedema
18. Chronic osteomyelitis/Sinus
19. Chronic ulceration of limbs
20. Backache and Sciatica
21. Spinal cord compression
22. Intermittent claudication/ulceration/gangrene

SOME COMMON SHORT CASES

SKIN AND SUBCUTANEOUS TISSUE

Cystic hygroma/Lymphocoele
Haemangioma in skin
Cavernous haemangioma
Chronic ulcer
Burns contracture
Cellulitis
Sebaceous cyst and complications
Abscess
Carbuncle
Synergistic gangrene
Erysipelas/Folliculitis
Keloid
Sinus
Lipoma
Solar keratoses
Benign melanoma
Papilloma
Squamous carcinoma
Basal cell carcinoma
Malignant melanoma

NECK

Branchial cyst/sinus
Enlarged Lymph nodes
Torticollis
Sternomastoid tumor
Laryngeal carcinoma

THYROID

Lingual thyroid
Simple Diffuse enlargement
Thyroglossal cyst
Solitary nodule of thyroid
Multinodular goiter
Thyrotoxicosis
Carcinoma of thyroid

HEAD

Sequestration dermoid- Internal/External
Preauricular sinus
Tongue tie
Ranula
Cleft palate and lip
Torn ear lobe
Black eye
Mucous cyst
Recurrent parotitis
Submandibular duct calculus
Mixed parotid tumour
Carcinoma of the parotid
Trismus
Facial palsy
Exophthalmos
Granuloma of scalp
Leukoplakia
Carcinoma of oral cavity (including tongue)

BREAST

Fibroadenoma
Nipple discharge
Breast mass
Carcinoma of Breast
Paget's disease
Gynaecomastia
Intermammary sinus

ABDOMINAL WALL

Femoral Hernia
Inguinal Hernia
Umbilical Hernia
Paraumbilical Hernia
Incisional Hernia
Epigastric Hernia

SCROTUM

Scrotal lymphoedema
Hydrocoele of cord
Hydrocoele – Primary and Secondary
Varicocele
Spermatocoele
Epididymal or cord nodule
Epididymoorchitis
Retractile testicles
Undescended/Maldescended testes

ANO RECTAL

Prolapsed haemorrhoids
Fissure in ano
Perianal haematoma
Fistula in ano
Rectal prolapsed
Abscess - Ischiorectal abscess
 Perianal abscess
Pilonidal sinus
Condylomata

HANDS, FEET AND LIMBS

Callosity
Viral warts
Paronychia
Ingrowing toe nail
Hyperhidrosis
Glomus tumor
Ganglion
Implantation dermoid
Dupuytren's contracture
Foreign body in soft tissue
Trigger finger
Tennis elbow
Painful heel syndrome
Madura foot

PENIS

Meatal stenosis
Phimosis
Paraphimosis

BONES AND JOINTS

POP cast on a fracture
Malunited fracture
Non-united fracture
Chronic osteomyelitis
Osteoma of skull
Osteochondroma
Bone tumor
Bursae around knee
Bursae around knee
Osteoarthritis of knee
Olecranon bursa
Semimembranous bursa

NERVES

Cervical rib/Thoracic inlet
syndrome
Meralgia paraesthetica
Carpal tunnel syndrome
Nerve palsies
Neurofibroma/Neurofibromatosis
& complications

VASCULAR

Varicose veins complications
DVT with ulcer
Gangrene of a finger
AV fistulae
Lymphoedema

OBJECTIVES/ GUIDELINES OF CLINICAL APPOINTMENTS

Introductory Appointment (one fourth of 4 week appointment)

First General Surgical appointment (4 weeks)

Second General Surgical appointment

Third General Surgical appointment

Professorial surgical appointment

Professorial Surgical Appointment-TH, Peradeniya

Welcome!

Theme- Become a part of the surgical team responsible for the care of patients.

The group will be subdivided into two as follows. Groups change on Day 18 and 36 at 7am.

1. Dr AGB/Dr AUBP/Dr KBG/Dr CH
2. Dr WT/Dr MDL

General

1. The entire appointment will be evaluated and a mark is given for the continuous assessment component of the Final MB examination (10%)
2. Discipline will be taken into account.
3. No leave will be given unless for proved ill health and letters of excuse must be submitted and recorded. Consultant must be informed first in the morning of any student who has taken leave for medical reasons. These days may have to be repeated.
4. Appointment cards must be carried by all students at all the time.
5. Students must teach each other during ward rounds to improve on presentation skills.
6. Students, in general, are poor in basic sciences. Special attention should be paid to this. Afternoon and evening classes should be utilized for this purpose. You should have read around the topics before coming to the classes.
7. Students can be off on Saturday afternoon unless on roster.

Monitor

There will be one monitor for each subgroup. Dr AGB monitor will be the chief monitor who will carry the overall responsibility. Allocating patients could be done by a student other than the monitor/s. Responsible for the attendance register (this should be marked by individual students. Register should be marked at 7.30am and 5pm during the weekdays and by 8am on Saturdays and Sundays. On Sundays the register should be marked at 1pm and 8pm too. Identify the lapses and bring them to the notice of the Head/Surgery or any other consultant. Maintain a list of teaching topics dealt during the appointment and hand over it at the end of the appointment to the Department of surgery having marked it on the program what was completed. Go through this document for other jobs. You hand over the responsibilities of the various jobs listed in the document to different students.

Endoscopy

Students must attend the endoscopy sessions on Tuesdays and Fridays (Colonoscopy).

Wards

1. All patients must be fully clerked on a separate paper which should be attached to BHTT
2. The two subgroups must do separate students ward rounds twice a week (Tuesday and Friday pm). This is for the students to get familiar with all patients belonged to that subgroup.

Student Internship

As clinical maturity comes from responsibility this scheme has been adopted. Two or more students from each consultant group will be interns to that group for one week. Each student should have completed at least one week of student internship.

The student intern will behave like an intern, ie

1. clerk all admissions
2. initiate policy of management
3. fill up necessary forms
4. communicate to the HO of any change in the clinical condition of the patients

Operating Theatre (Routine and Emergency)

Owners of patients should go to the OT. This is true for both morning and afternoon sessions. You must scrub up for your patient.

In the OT

1. Know the case to be operated on why the operation is necessary/how was the patient diagnosed and assessed?
2. Learn aseptic techniques-sterilization, scrubbing, disinfection...etc
3. Identify the instruments that are commonly used and learn the skills of handling them eg Artery forceps, Scissors..etc
4. Learn how to behave in the OT
5. Question the surgeon.
6. Learn clinical skills intubation, setting up a drip, insertion of NG tube.

Clinics

1. You must have finished clerking first few patients by 8am and be ready for the consultant.
2. On Mondays non casualty group students go to Dr AUBP clinic.
3. Maintain a roster so that all students will have an opportunity of seeing see patients attending the Vascular and Rectal clinics

EOT

This is the best place to see and assist minor operations under LA. Maintain a roster for Tuesdays 2pm and Wednesdays 2pm.

Surgical casualty work

Casualty group reports for work by 7.30am on Sundays. Six students should remain overnight on duty from 10pm to 7am. Casualty roster must be prepared by the monitor and display it in the students room.

All admissions must be clerked within 15 minutes of admissions.

Student presentations (Overview on major topics)

Students are expected to give an overview on a major topic (eg Gall stones, Intestinal obstruction...etc) based on a patient. Every student will have an opportunity to do this as four students will present in one afternoon from 2-4pm as scheduled below. Patient should be presented first, then the student discusses the patient followed by giving an overview on the subject. There will be a wide discussion among the audience to conclude the presentation. Presenters should display on the ward notice board (at the entrance) of the topic of presentation three days in advance. All students should possess adequate knowledge on the topics.

Planned Teaching Sessions (You may appoint two students to coordinate this one for student presentations and the other to organize the rest)

Wednesday of the First week from 5pm-Scrubbing and theatre discipline (monitor should arrange this with the sister incharge of the OT)

Tuesday 2pm (DrMDL)

Week1 MCQ test
Week2 Skills training-skills lab
Week 3-8 Ward teaching/Student presentation

Wednesday 2pm DR CH- Short cases

Friday 2pm (Dr KBG)

Week1-week7 Ward teaching/students presentation
Week 8 MCQ end of the appointment.

The following topics should be covered during the appointment. It is your responsibility to tell the teachers and get the list completed.

- MNG, Thyroid cancer, Thyrotoxicosis
- PVD Aneurysms, DVT, Vascular emergencies
- Colo-Rectal cancer, common ano rectal conditions (Hemorrhoids, Carcinoma Rectum, Fissure, Fistula), inflammatory bowel disease
- Acute abdomen, Intestinal obstruction, Peritonitis
- Carcinoma of Breast and benign breast conditions
- Jaundice, Gall stones, Liver cancer, Acute and Chronic Pancreatitis/Cancer
- Gastric Ulcer/CA
- LUTS, BPH, Ca Prostate, Bladder cancer, Haematuria, Renal Cancer, Testicular cancer
- Organ transplantation
- Acute appendicitis, Splenic disorders

- Dysphagia, Dyspepsia,
- Chronic abdominal pain in children and adults
- Common Paediatric surgical conditions
- Neonatal Surgical emergencies and Neonatal Jaundice
- Congenital anorectal anomalies
- Burns

Classes by SR/Registrars (monitor should discuss/remind these classes with the Reg/SR concerned the previous day). A tentative schedule is shown below.

Monday 4-5pm

Week 1	Preparation for Endoscopy-Reg DR AGB
Week 2	Head Injuries observation and management-SR Prof CR
Week3	Surgical Nutrition-Reg Prof CR
Week4	Fluid balance and hypovolaemia-Reg WT
Week 5	Diabetic patient-SR Prof CR
Week 6	Preop preparation-Reg Dr WT
Week 7	cover for missed classes-SR Dr MDL
Week 8	Cover for missed classes-Reg Dr AGB

Wednesday 4.30-5pm

Week 1	Venous cut down-SR Dr MDL
Week 2	Intercostal drainage-Reg Dr MDL
Week3	Wound care-Reg Dr AGB
Week4	NG tube and drains-Reg/Dr MDL
Week 5	Stoma care-Reg Dr AGB
Week 6	PD catheter-SR Dr MDL
Week 7	Tracheostomy-Reg Dr WT
Week 8	Suture materials-Reg Dr MDL

Thursday 4.30-5pm

Week 1	Postop pain-Reg WT
Week 2	Long case discussion-SR Prof CR
Week3	Short cases-SR Prof CR
Week4	Lower back pain-Reg Prof CR
Week 5	Long case-abdominal pain-SR Prof CR
Week 6	Burns-Reg Prof CR
Week 7	Cover for missed classes on PH-SR Prof CR
Week 8	Cover for missed classes on PH-Reg Dr WT

Saturday 8AM

Clinical long case, problem identification, Natural History and Prognosis. Three long cases-3 per week with problem identification of each case and natural history and prognosis of two of the cases. Students should prepare cases for presentation. Each student should have presented at least one case during the surgical appointment.

4th Saturday 8am to 12 noon Short cases mock examination (will be organized by Dr AUB)
 8th Saturday Assessment of students by Dr AGB

Sunday

First Sunday 7.30am- All students report for work and attend the trauma training workshop

Case discussion

Each student writes a case discussion and hands over to Dr AUB on 4th Monday morning in the clinic to be corrected. Format is as follows

- History of the patient, examination, summary, clinical diagnosis with reasons, investigations done with reasons for doing them and interpretation of results and how the patient was managed (including operative details). Be critical here. Alternative ways of management should be discussed. Overview on the topic, bibliography and acknowledgement should be included.

Deviation from the general instructions will not be taken lightly. You are responsible for your actions.

You are encouraged to discuss with the academic staff of any changes that you wish to make to the above program.

The cheif monitors, on the final day, should hand over a copy of this program to Mrs. Sepali at the Department of Surgery, indicating what was done and any lapses.

All the best!

Copies to all students, Registrars and SR's, Consultants

MDL/Sep

8.11.2010(revised)

ENT surgery

Objectives

Learners should be able to identify emergencies and common ENT problems, manage the emergencies, plan and execute management in routine cases.

Clinical appointment

Duration is two weeks

Broad learning outcomes

The clinical appointment gives an opportunity to witness the structure, organization, facilities and treatment modalities for patients with E.N.T diseases. In the E.N.T clinic learners should understand the arrangement set out for examination of Ear, Nose and Throat and also the role played by clinically associated sections such as Audiology, department, Speech therapy department, Hearing aid section, Ear mould lab, Endoscopic department (Stroboscopy, fiberoptic laryngoscopy)

Competence expected

- Should be able to use the auroscope and examine the TM and identifies its diseases
- Use of head mirror
- Use of Indirect laryngoscopy
- Use of nasal specula
- Proper examination of oral cavity with tongue depressor
- Ear syringing
- To pack a Nose in epistaxis
- To manage a patient with tracheostomy

To understand the basic principles and differentiate normal findings from abnormal in

- Pure tone Audiogram (for Hearing)
- Auditory brain stem Audiometry (for Hearing)
- Distraction test (for hearing)
- Caloric test (for Balance)

Detailed outcomes in competencies

Ear

Otoscopy to diagnose, Normal Anatomy, Wax, Foreign bodies, AOM, Otitis media with effusion, CSOM

Understand the use of **hearing aids**, its types, fitting and problems

Understand the use, Ear moulds

Nose

- Normal Anatomy – Outside / inside
- Nasal air flow
- Deviated septum /septal haematoma
- Nasal bone fracture
- Nasal polyps / FB / tumours
- In Allergy -
- Any bleeding sites

Naso pharynx / Oro pharynx / hypo pharynx / larynx

- Identify normal Anatomy
- Tonsillitis / Malignancy / benign ulcers
- Identify foreign bodies in tonsils
- Appearance of larynx / Movement of vocal cords
- Appearance in common abnormal situations, Snoring, benign and malignant ulcers, Tumours

Neck

- To feel the normal structure of larynx, trachea
- Identify – crico-thyroid membranes
- Basic neck lumps
- Appearance in laryngectomy / in a tracheotomy patient

Learners should be able to demonstrate thorough theory knowledge in the following subject areas. It is expected for the students to apply theory knowledge to the management of patient. Reading will be supplemented with lectures on

1. Clinical Anatomy and Physiology of Ear / Nose / Sinuses
2. Clinical Anatomy and Physiology of Pharynx / Larynx / oesophagus
3. Disease of External Ear / Middle Ear secretory otitis media, AOM, CSOM / Balance / vertigo BPPR, Menier's disease
4. Nasal Allergies / sinusitis / complications
5. Nasal Trauma / Epistaxis
6. Foreign bodies in ENT practice
7. Laryngeal disorders (Dysphagia/ Stridor/ Tumors/ Infections)
8. Swallowing problems/ Speech disorders
9. Disorders of tonsils / Adenoids
10. Snoring and OSAS / Any other topic on ENT

ORTHOPAEDIC CURRICULUM

The general objectives are:

1. To gain knowledge about the important and common problems in Orthopaedics,
2. To understand the general principles of patient's symptomatology, differential diagnosis and treatment of Orthopaedic disease. Students are also given an account on the specific orthopaedic terminology.
3. To emphasize on basic aspects in trauma and management of these.
4. To acquire the skills of taking good history of both trauma and elective cases, and how to perform examination of joints.
5. To help develop the students' ability for self-learning, problem solving and presenting himself properly.

The specific goals are:

1. Giving them the important knowledge of common disorders,
2. Develop self learning through problem solving sessions.
3. Developing the skills of examination of major joints through clinical teaching and attending clinics with the tutors.
4. Give the students the ability to read an x-ray and extract information out of it.
5. Developing the use of multimedia in the process of teaching and making an electronic library which will include all lectures given as well as x-rays and illustrations.
6. Developing the skills of the tutors in teaching and assessing students.

Opportunities for Learning/ teaching

The set goals are achieved through the following ways:

1. *Giving basic information through LECTURES:-* There will be a series of 10 presentations, 60 minutes each (please refer to the lecture schedule in Orthopaedics)

2. *During the Clinical appointment:-* The Orthopaedic Department in the Teaching Hospital, Kandy will accommodate medical students for a very brief course Orthopaedic Surgery for 12 days. 8-12n.

Venue: Orthopaedic Clinic, Ward 3 and Ward 24

A. The opportunities are provided for

- (a). history taking and physical examination of patients with bones and joints disorders
- (b). students to discuss and present themselves through TUTORIAL, in which skills of examination and differential diagnosis are discussed. The time of tutorials is 1 hours.
- (c). development of self learning and logical thinking through PROBLEM SOLVING sessions. These are also set at 1 hour.
- (d). learning around/from patients presenting with open fractures and patients admitted for routine Total Knee Replacement
- (e). design a national programme for prevention of RTA
- (f). post operative management of patients with OR/IF of femur

The topics are chosen by the teaching staff in the department before the beginning of the year and the course organizer has the freedom to choose 3 topics from above list, for each batch of students. The students are divided into 3 groups; each is given a problem. A tutor is assigned to each group, and all students participate in the discussion.

B. Hands-on skills

The above is achieved through attending sessions of clinical bedside teaching by Senior MO/Nurses about application of POP, log-rolling, application of traction, running of a post-trauma clinic.

C. Common Orthopaedic trauma

General management of Common Orthopaedic trauma by bedside teaching/learning

D. Day to Day program of the Clinical Appointment:

1. Monday: Class Taken By MO / Reg / SR – Orthopaedic Clinic

INTRODUCTION TO ORTHOPAEDIC TERMINOLOGY:

What sorts of patients come to seek Orthopaedic care? _Deformity, valgus, varus, scoliosis, khyphosis, pes planus etc.

Meaning of Orthopaedic procedure terminology, (Osteotomy, Arthrotomy. Arthroplasty, THA etc), implants, arthroscopy, asepsis and the risks of wound infection in OS

History taking in an orthopaedic patient- Casualty? , Routine? , Different type of clinics, usual follow-up of a fracture, Physiotherapy,

Collection of patient shown with X Rays, introducing students to the array of Casts / Implants plaster cutting, demonstration of plaster disease etc.

Rules of the unit

2. Tuesday : Orthopaedic Clinic - VOS

Common symptoms

Basics of examination of a joint

Basic and special investigations.

Common everyday conditions:

Cervical Spondylosis, Tennis elbow, Triggering Fingers ,CTS, Back Pain, OA Knees, Ganglions

3. Wednesday: Ward 3 – Ward 24 VOS: Grand ward Round:

Bedside teaching

Prevention of fractures, mechanisms of fractures, common fractures, their management, wounds, plasters and management, traction, internal fixation devices, common Fractures of children, common fractures of the elderly.

Problem Solving: Session 1

Session One: patient sustains an Open Fracture:

Group divided into 4 sub groups. Each member takes on a different topic. (History, examination, description of wounds, management, expected complications, follow up, rehabilitation). Students must be prepared before they come, by reading and web browsing.

4. Thursday: Ward rounds: Taken by MO / SR / Reg

Some Cold orthopaedic conditions.

Back pain, Perthes, Transient synovitis, Child abuse, Infections, OA, Insufficiency fractures of the old, OP, prevention diagnosis and treatment.

Problem Solving: Session 2

Second group: Preparing a patient for routine surgery –

Indications, decision making, investigations, referral to others, optimizing the patient. day of admission, checklist, immediate pre-op preparation, DVT prophylaxis, consent, prevention of infection.

5. Friday: Pediatric Clinic - VOS

Common pediatric Orthopaedic conditions
CTEV, DDH, Bowing, Knock knees, Torticollis,

6. Saturday: Ward round: VOS

Day to day problems of Orthopedist patient,
Examination of Knee, Spine, Shoulder (MO)

7. Monday: Clinic: MO / SR / Reg

General running of a fracture post op clinic, cases, how follow-up decisions are made
Post-op complications
Management of post-op complications
Orthopaedic Emergencies: absent Pulse, Cauda Equina compression, Compartment syndrome, crush syndrome, pelvic fracture.

8. Tuesday: Clinic - VOS

Common adult Orthopaedic Conditions
Questions and answers only. Students must come prepared

9. Wednesday - Ward Round – VOS

More on common musculoskeletal conditions, their management - bedside

Problem Solving: Session 3

3 rd group: Prevention of accidents
Organizing an evacuation service
Students must give written suggestions in an orderly manner from each group

10. Thursday – Ward / MO /Reg/ SR

More cold orthopedic conditions
How joints are aspirated and injected (keep patients ready)
General functioning of ward
How lists are prepared
How physiotherapy is organized
How plans are made.
How notes are made

11. Friday – Clinic - VOS

Common Pediatric Orthopaedic conditions –

Problem Solving: Session 4

Patient with OR/IF Femur presents with fever and Discharge on 4th day

12. Saturday: Ward Round VOS

Questions only (later this will be replaced by a MCQ)
Signing of record books

E. Assessment (to be implemented)

The students will be assessed by:

1. Taking their attendance with emphasis on attending clinicals and tutorials.
2. Unmanned OSCE which includes direct specific questions on an x-ray, a patient, a sign or a method of treatment. Both exams carry 40 marks.
3. MCQ. This carries 20 marks.

OPHTHALMOLOGY

Main Objective

The main objective of this 'module' is to be able to describe the key concepts, relevance and clinical applicability of ophthalmic basic sciences.

Summary

Eye is a vital sensory organ through which we see the external environment. Therefore any disease affecting the eye is of major concern to patients. Blindness is a major disability in life. You may come across conditions such as cataract, red eyes, short sightedness and farsightedness, which are common eye disorders. Eye injuries often lead to visual disabilities. Many diseases involving other systems can affect the structure and function of the eyes. Therefore an understanding of the structure and function of this organ is important.

In addition, vision is also necessary for various other bodily functions such as maintenance of posture & motor co-ordination. Eye is also involved in non-vision activities like expression of feelings, blinking, crying & tearing.

Recommended references/ web sites (Text books and recent journal articles)

Guyton – Text book of medical Physiology

Ganong – Review of medical Physiology

Basic and clinical science course – Fundamentals and principles of Ophthalmology

Section 2 American Academy of Ophthalmology

Detailed Objectives

Vision (Basic Sciences in Ophthalmology)

1. Discuss the term binocular vision
2. Explain the role of pupil in the visual apparatus considering the concept eye as a camera.
3. Explain the basic principles underlying the optics of vision with special reference to refraction, focal length, refractive power, image formation, visual acuity
4. List the errors of refraction, describe how that occur and explain the basis of correcting each of them.
5. Explain the term accommodation as applied to the eye and explain the causes of the accommodation – convergence reflex.
6. Describe the functions of retina.
7. Explain the basic principles underlying photochemistry of vision.
8. Explain the mechanism of dark and light adaptation.
9. Describe the basis of colour vision in terms of photo pigments and their light absorption spectra.
10. Discuss the usefulness of contact lenses.
11. Describe the anatomy of orbit and eyeball including blood supply, nerve supply and histology of eye.
12. Explain the relationship of eyeball to skull and other structures.

13. Trace the visual pathway from the eyeball including blood supply, nerve supply and histology of eye.
14. Correlate the lesions along the visual pathway with their anatomical structures.
15. Describe the development of vision and visual defects from childhood to old age.
16. List the tests of vision and explain their bases.
17. List the different types of visual aids and briefly discuss their functions.
18. List the common drugs used in ophthalmology and explain their actions.

Indicative syllabus

1. Eye as a vital organ

Be aware of blindness as a major disability.

List the causes of blindness.

Discuss the anatomic – physiologic correlates of different causes of blindness.

Be aware that injuries are a common cause of blindness and other eye disorders.

List the different causes of injuries to eye and discuss the methods of preventing them.

Explain how corneal opacities could occur and briefly discuss the role of corneal transplants as a method of treatment of corneal disorders.

Explain the physiological basis of the following disorders of eye: cataract glaucoma, strabismus.

Explain the relationship between eye and diabetes.

2. Eye as a projection of brain

Describe the structure of eye muscles and explain how they are controlled by the relevant cranial nerves.

Explain the central control of conjugate movement.

3. Achieve competence in basic eye examination

Lids and orbit

Visual acuity

Eye movements

Conjunctiva and cases

Cornea

Pupils

Afferent pupil defect

Efferent pupil defect

Red reflex and funduscopy

Fundus

- Optic disc
- Central retina
- Peripheral retina

Visual fields

Acute eye diseases and common eye diseases

(Students are expected to have basic knowledge about these conditions)

1. Common visual symptoms

Loss of vision

Floater

Double vision

Loss of vision

Reduced visual acuity or loss of visual fields
Acuity unilateral visual loss
Acuity bilateral visual loss
Chronic unilateral/ bilateral visual loss
Transient loss of vision

2. Acuity Unilateral Visual Loss

Main causes

Central retinal artery occlusion
Anterior ischaemic optic neuropathy
Secondary to a). Temporal arteritis
 b). Atherosclerosis
Central retinal vein occlusion
Macular haemorrhage
Trauma

Less common causes

Acute ischaemia
Optic neuritis
Vitreous haemorrhage
Retinal detachment
Endophthalmitis
Functional

3. Acute bilateral visual loss

Common causes

Vertebral artery insufficiencies
Occipital ischemia or stroke
Optic nerve ischemia (Acute ischaemic optic neuropathy)
Concedes temporal arteritis

Less common causes

Proliferative diabetic retinopathy
Malignant hypertension
Blood dyscrasias leading to bilateral central retinal vein occlusion
Functional or hysterical often in children or compensation related causes.

4. Chronic Unilateral and bilateral visual loss

Main causes

Age related maculopathy
Cataract
Incorrect or old glasses

Less common causes

Chronic Glaucoma, Hypertension, Diabetes
Space occupying lesion
Heavy consumption of alcohol and cigarettes
Keratoconus

5. Transient loss of vision

Main causes

Carotid artery diseases

[Platelet or cholesterol emboli in the retinal circulation thrown off from atherosclerotic carotid arteries]

Atrial fibrillation, causing emboli

Vertebrobasilar or gross carotid insufficiency leads to bilateral simultaneous transient loss

Temporal arteritis

Migraine

Papilloedema

ONCOLOGICAL SURGERY

Objectives of the clinical appointment:

1. Identify cancer as a disease with a natural history of progression.
2. Learn to evaluate cancer patients (to facilitate management under principles of section 3)
 - (a). Diagnosis
 - (b). Staging
 - (c). Physical fitness
3. Learn principles and concepts of a cancer treatment plan (as complex treatment with a multidisciplinary approach)
 - (a). Prevention – Primary & Secondary
 - (b). Curative treatment
 - (c). Palliative treatment
 - (d). Terminal care
4. Learn basic principles of customizing treatment for a cancer patient.

NEUROSURGERY

Learners are expected to acquire knowledge and management skills on the following neurosurgical conditions.

1. Head Injury

Pathophysiology in detail and management – Initial and long term with emphasis on life support lines.

2. Spontaneous Brain Hemorrhage

Causes, initial management, complications, special investigations

3. Brain tumours

Symptoms & signs of tumours in various locations in the brain and outline of management of common brain tumours

4. Spinal cord and Cauda Equina Compression

Signs & symptoms of compression along with causes of the acute and chronic compressions and outline of management

5. Hydrocephalus

Causes and outline of management.

6. Congenital abnormalities

Affecting the spinal elements and outline of management of those.

7. Spinal trauma

Outline of spinal injuries and management. Long term affects of bedridden patient and prevention by spinal fixation and early mobilizations.

8. Cerebral abscess

9. Surgical management of pain

10. Peripheral nerve diseases

Injuries and entrapment syndromes (carpal tunnel syndrome, meralgia paraesthetica, thoracic inlet syndrome)

Exposure in Neurosurgical theatre

Understand the functioning of neurosurgical theatre, surgical access to brain and spinal cord.

UROLOGY

Clinical appointment is for one week duration (3 Theatre days & 3 Clinic days)

The topics discussed with students are (using patients),

- Introduction to urology, including symptoms, signs and history taking and examination
- Differential diagnoses of common clinical symptoms
- Urolithiasis and urinary tract obstruction
- Tumours of the urinary tract – mainly bladder, renal and prostate tumours
- Benign prostatic hyperplasia

Students will get the opportunity to take histories and examine patients with the full variety urological conditions. In addition they should see and understand the principles of,

- Prostate biopsies
- Urethral catheterization
- Bladder irrigation and washouts
- Flexible cystoscopy
- ESWL (Extracorporeal Shockwave Lithotripsy)
- Pre-operative assessment and preparation of urological patients
- Post-operative management of patients – including urostomies

Students should witness and understand the principles of

- TURP, TURBT, Urethrotomy, Cystolitholapexy
- Ureteroscopy and IPL (Intracorporeal Pneumatic Lithotripsy)
- Pyelolithotomy, Nephrolithotomy, Nephrectomy, Urethroplasty, Orchidectomy

Dr. P.G.D.S. Samaraweera
Consultant Urologist
General Hospital, Kandy

ASSESSMENT

OSCE at the end of the Introductory appointment (add details)

MCQ test at the end of the Short appointments (add details)

Clinical exam between the first and second half of MS appointments (add details)

Multiple choice question paper at the beginning and end of the professorial appointment for each group (add details)

Short case clinical examination in the fourth week of the Professorial surgical appointment (add details)

Viva at the End of the Professorial surgical appointment (add details)

Final MBBS examination in Surgery (add details)

APPOINTMENT CARDS (samples)

For the non Professorial appointments to be maintained by the student

Professorial Appointment card (need to be revised)

Reading list

LECTURE PROGRAMME IN SURGERY

Lectures will be done in three blocks. Foundation lectures will be done during the third year, intermediate during the fourth and advanced during the fifth year.

Foundation lectures – Starting at the end of the 5th semester or beginning of the 6th (ie 3rd Year)

1. The disciplines of surgery Prof.A.P.R. Aluwihare or
Prof.Channa Ratnatunga or
A guest lecturer
2. Asepsis and Surgery Dr.Ranjith Senevirathne
Dr.Gamini Buthpitiya
3. Wounds and Wound Healing
Factors that affect wound healing
How surgeons get wounds to heal
Dr.Prasad Pitigalaarachchi
4. Response to trauma Dr.M.D. Lamawansa
5. Soft tissue infections
Organisms
Presentations
Factors that influence soft tissue infections
Principles of management
Dr.K.B. Galketiya
6. Shock
Blood loss
Dehydration
Sepsis
The pathophysiology
Identification of Principles of Treatment
Dr. Gamini Buthpitiya
7. Anaesthesia and Surgery
Pain relief in surgery Department of anaesthesia
8. Principles of Antibiotic use in Surgery Dr.G.D.L.P. Jayawardhana
9. IV Fluid therapy
Electrolytes
Alimentatio Department of Anaesthesia
10. Blood and Blood products use Dr.A.U.B. Pethiyagoda
11. Use of Implants
Live and Non-Living Dr.M.D. Lamawansa
12. Outline of cancer
Diagnosis
Staging and Grading
Management modalities and Principles of Surgery
Prognosis Dr. Gamini Buthpitiya

Intermediate and Advanced

7th to End of 10th Semester – But best uninterrupted during the 4th and 5th Years

Intermediate	Advanced
<p>Vascular System - Prof. Channa Ratnatunga</p> <p>1.Occlusive Arterial Disease of the Limbs 2.Venous Disorders</p>	<p>Dr.M.D.Lamawansa,Dr.K.B.Galketiya</p> <p>3.Trauma 4.Malformations 5.Lymphatic Disorders 6.Outcome of Surgery for Occlusive Vascular Diseases</p>
<p>Gastro-Enterology - Dr. Gamini Buthpitiya</p> <p>1.Symptomatology and Investigation of the GI tract 2.Ano rectal non-malignant diseases 3.Peritonitis and Trauma</p> <p>4.Gall stone disease and Pancreatitis Acute/Chronic 5.Peptic Ulcer and Reflux disease 6. GI bleeding - Upper and Lower</p>	<p>7.Carcinoma of the Oesophagus Stomach Pancreas Biliary System</p> <p>8.Colorectal Carcinoma as a model for Carcinogenesis, Screening and Surveillance 9.Motility disorders Achalasia IBS Biliary dyskinesia Hirshprung's Disease</p> <p>10.Inflammatory Bowel disease</p>
<p>Urology - Dr.A.U.B.Pethiyagoda</p> <p>1.UTI 2.Lower Urinary Tract Problems e.g.Prostatitis 3.Calculus Disease (To be updated by Dr.AUBP)</p>	<p>Dr.P.G.D.S. Samaraweera</p> <p>4.Carcinomas of Testis and Prostate 5.Carcinoma of Kidney and Bladder 6.Congenital Abnormalities</p>
<p>Orthopaedics - Dr.Gamini Edirisinghe</p>	<p>Dr.H.J. Suraweera / Dr.S. Udagedara</p>
<p>Breast- Prof. Channa Ratnatunga</p> <p>1. Breast Cancer</p>	<p>Dr. Kanishka De Silva, Dr. K. B. Galketiya</p> <p>2. Benign Breast Disease</p>