

EXAMPLE OF LECTURE SYLLABUS:

1. Initial Assessment and Management

Objectives:

- a. Identify the correct sequence of priorities to be followed in assessing the multiply injured patient.
- b. Outline the primary and secondary evaluation surveys to be used in assessing the multiply injured patient.
- c. Identify and discuss the key components of and rationale for obtaining the patient's history and the history of the trauma incident.
- d. Explain guidelines and techniques to be used in the initial resuscitative and definitive-care phases of treatment of the multiply injured patient.
- e. Identify those injured patients who may require transfer from a primary care institution to a facility capable of providing the necessary level of trauma care.
- f. Outline procedures to optimally stabilize and prepare the trauma patient for safe transport to a higher-level trauma care facility via the appropriate mode of transportation.

2. Airway and Ventilatory Management

Objectives:

- a. Recognize the signs and symptoms of acute airway obstruction.
- b. Identify the clinical settings in which airway compromise is likely to occur.
- c. Explain the techniques to establish and maintain a patent airway and confirm the adequacy of ventilation and oxygenation.
- d. Define what is meant by the term definitive airway and the steps needed to maintain oxygenation before, during, and after establishing a definitive airway.
- e. Perform definitive airway placement with maintenance of cervical spine alignment during the skill station, and perform percutaneous transtracheal jet intubation and cricothyrotomy during the surgical practicum.
- f. demonstrate ventilatory techniques for one and two rescuers.

3. Shock

Objectives:

- a. Define shock.
- b. Discuss the similarities and differences in the various etiologies and presentations of shock.
- c. Recognize the clinical shock syndrome and correlate the patient's acute clinical signs with the degree of volume deficit.
- d. Discuss the basic principles of emergency treatment of hemorrhagic shock and their application based on the patient's clinical response to therapy.
- e. Discuss fluid management problems unique to the trauma patient.
- f. Demonstrate various techniques of central and peripheral vascular access, including cutdowns and intraosseous insertion.

4. Cardio-Thoracic Trauma

Objectives:

- a. Identify and manage the following immediately life-threatening chest injuries evidenced in the primary survey:
 1. Airway obstruction
 2. Tension pneumothorax
 3. Open pneumothorax
 4. Massive hemothorax
 5. Flail chest
 6. Cardiac tamponade
- b. Identify and initiate treatment of the following potentially life-threatening injuries assessed during the secondary survey:
 1. Pulmonary contusion
 2. Myocardial contusion
 3. Aortic disruption
 4. Traumatic diaphragmatic rupture
 5. Tracheobronchial disruption
 6. Esophageal disruption

5. Abdominal Trauma

Objectives:

- a. Describe the anatomic regions of the abdomen.
- b. Discuss the difference between blunt and penetrating abdominal injury patterns.
- c. Identify the signs suggesting retroperitoneal, intraperitoneal and pelvic injury.
- d. Outline the diagnostic and therapeutic procedures specific to abdominal trauma.
- e. Discuss diagnostic peritoneal lavage and demonstrate the ability to perform this procedure during the surgical practicum.

6. Head and Spinal Cord Trauma

Objectives:

- a. Review specific principles of anatomy and physiology related to head R injuries.
- b. Identify and discuss the principles of general management of the unconscious patient and delayed complications.
- c. Outline the method of evaluating head injuries using minineurologic examination.
- d. Identify and discuss management techniques for specific types of head injuries.
- e. Discuss clinical signs and outline priorities for the initial management of injuries identified during patient assessment.
- f. Discuss the principles involved in evaluating vertebral and spinal cord trauma.
- g. Identify the types of vertebral injuries and outline methods of treatment.
- h. Spinal cord compression
 1. conditions
 - i. fracture and dislocation
 - ii. degenerative : discs osteophytes
 - iii. tumours
 - iv. infections
 2. sign and symptoms
 - i. acute vs. chronic
 - ii. complete versus partial
 - iii. different cord compression
 - iv. syndrome: brown-sequard syndrome/anterior cord compression syndrome

7. Injuries due to Burns and Cold

Objectives:

- a. Estimate the burn size and determine the presence of associated injuries.
- b. Outline measures of initial stabilization and treatment of patients with burns and patient with cold injury.
- c. Identify special problems and methods of treatment of patients with burns and patients with cold injury.
- d. Outline criteria for the transfer of burn patients.

8. Pediatric Trauma

Objectives:

- a. Discuss the unique characteristic of the child as a trauma patient.
 1. Types of injury
 2. Patterns of injury
 3. Anatomic and physiologic differences in children as compared with adults
 4. Long-term effects of injury

- b. Discuss the primary management of the following critical injuries in children based on the anatomic and physiologic differences as compared with adults.
 1. Types of injury
 2. Shock and maintenance of body heat
 3. Fluid and electrolyte management
 4. Medications and dosages
 5. Cervical spine injuries
 6. Psychologic support

- c. Discuss the injury patterns associated with the abused child and the elements that lead to the suspicion of child abuse.

- d. Discuss the epidemiology of childhood injury and effective strategies for injury prevention in children.

(UROLOGY):

1. Investigations of the urinary tract

Objectives:

- a. Learn about principles of common urological investigation: (urine tests, urethral discharge, renal function tests, KUB, IVP, VCUG, AUG, U/S, C-T Scan, MRI, flow rate, urodynamic study).
- b. Learn how a normal investigation would look like and how this investigation should be interpreted.

2. Presentation of common upper urinary tract disorders and urolithiasis

Objectives:

- a. Identify systematic manifestation of renal disorders.
- b. Learn how to differentiate between local and referral renal and ureteric pain, and learn clinical signs of renal & ureter pathologies.
- c. Learn about differential diagnosis of renal masses a (hydronephrosis, renal tumours, renal abscess, renal cysts, perinephric hematoma).
- d. Learn about clinical signs related to urolithiasis.
- e. Learn an outline of investigations for patient with urolithiasis.
- f. Learn an outline of the treatment of urolithiasis without going in details.

3. Presentation of common lower urinary tract disorders and the prostat

Objectives:

- a. Learn about symptoms related to the act of urination (frequency, nocturia, urgency, dysuria, enuresis).
- b. Learn about symptoms of bladder outlet obstruction (hesitancy, poor stream, dribbling, urgency, acute urinary retention, chronic urinary retention, interruption of urinary stream, sense of residual urine, cystitis).
- c. Learn about symptoms of urinary incontinence (full incontinence, stress incontinence, urge incontinence, overflow incontinence).
- d. Learn about symptoms related to the change in urine colour or smell (cloudy urine, pyematuria, dysuria, bloody urine, idiopathic urethritis).
- e. Learn about clinical signs related to lower urinary tract disease (palpable bladder, bladder mass, rectal examination, prostatic signs).

- f. Learn about important neurologic signs related to urological diseases.
- g. Learn about symptoms and signs of benign prostatic hyperplasia and the prostate symptom score.
- h. Outline the needed investigations (laboratory studies, uroflowmetry, imaging studies, ultrasound) without going into specific details
- i. Outline the treatment plan and natural course without going into specific details

4. Presentation and management of common scrotal and testicular disorders

Objectives:

- a. Learn about differential diagnosis of common scrotal disorder (testicular tumours, varicocele, hydrocele, hematocele, spermatocele).
- b. Learn about clinical signs of acute and chronic epididimoorchitis.
- c. Learn how to outline the needed investigations.
- d. Learn the basics of treatment without going into details.

5. Presentation and management of common infections of the urinary tract

Objectives:

- a. Learn about symptoms and signs of common infections of the urinary tract (pyelonephritis, T.B., bilharziasis, recurrent cystitis, sexually transmitted disease, acute and chronic prostatitis).
- b. Learn an outline about the investigations of suspected urinary tract infection.
- c. Learn an outline about treatment of urinary tract infections without going into details.

6. Common urogenital tumours

Objectives:

- a. Learn about the symptoms and signs of common urogenital tumours.
 - 1. Renal cell carcinoma of the kidney.
 - 2. Transitional cell carcinoma of the bladder
 - 3. Adenocarcinoma of the prostate
- b. Outline the needed investigations.
- c. Outline the planning of management without going into the details.

7. Presentation and management of common pediatric urinary tract anomalies and vesicoureteric reflux.

Objectives:

- 1. Learn about clinical presentation of common pediatric urogenital anomalies (PUJO, VUJO, duplication anomalies, PUV, MCDK).**
- 2. Learn about presentation of UTI and VUR in children.**
- 3. Outline the needed investigations.**
- 4. Outline the basics of treatment.**

(GENERAL SURGERY):

1. Differential diagnosis of abdominal pain (acute & chronic)

Objectives:

- a. identify and discuss the common causes of abdominal pain (acute & chronic)
- b. present and interpret a good history from patients with abdominal pain and identify the possible cause/s from the site, character and radiation of the pain.
- c. conduct a sound systematic abdominal examination
- d. differentiate between visceral and parietal abdominal pain and identify the source of each.

2. Gastrointestinal and hepatobiliary investigations

Objectives:

- a. discuss the basic investigations of GIT and Hepatobiliary system to reach a diagnosis (lab tests, plain abdominal x-ray, CT Scan, Ultrasound, MRI, cholangiogram, endoscopy).
- b. learn how a normal investigation would look like and how this investigation should be interpreted.

3. Presentation and management of biliary obstruction and biliary stones

Objectives:

- a. Recognise the signs and symptoms of cholecystitis (acute and chronic)
- b. Outline common causes of biliary obstruction.
- c. Present and interpret a good history from patients with jaundice and to be able to differentiate between different types of jaundice clinically
- d. Discuss the basic investigations for a patient with obstructive jaundice or gall stone diseases.
- e. Outline the methods of treatment.

4. Differential diagnosis of abdominal masses and abdominal hernae

Objectives:

- a. Outline the common causes of abdominal masses.
- b. Demonstrate a sound clinical approach (history and examination) to identify the possible cause/s of abdominal mass.
- c. Describe different types of abdominal hernae, outlining the common causes and precipitating factors.
- d. Outline the methods of treatment for each.

5. Presentation and management of common surgical diseases of the pancreas and the stomach.

Objectives:

- a. Recognise the signs and symptoms of acute and chronic pancreatitis.
 - b. Identify and discuss the presentation and surgical complications of peptic ulcer disease.
 - c. Outline the common causes of haematemesis and the principles of their management.
 - d. Identify the common types of pancreatic and gastric tumours, demonstrate a sound clinical approach and discuss the principles of their treatment.
6. Presentation and management of common surgical diseases of the small and large bowel

Objectives:

- a. Outline the common causes of rectal bleeding and the principles of their management
 - b. Discuss the common types of small and large bowel tumours and methods of their basic investigations and treatment
 - c. Describe sound clinical approach of the inflammatory bowel disease.
 - d. Recognise the signs and symptoms of acute appendicitis.
 - e. Recognise the signs and symptoms of intestinal obstruction and clinical differential diagnosis
7. Presentation and management of neck common swellings and the thyroid gland

Objectives:

- a. Identify the common causes of neck swellings and conduct a sound clinical approach to reach a diagnosis.
- b. Recognise symptoms and signs of different types of goitres, discuss the basic investigations of the thyroid gland and outline principles of management for different problems.
- c. Outline the common causes of cervical lymphadenopathy.

8. Presentation and management of portal hypertension, and common surgical diseases of the liver:

Objectives:

- a. Outline different causes of portal hypertension.
- b. Discuss the management of bleeding oesophageal varices.
- c. Recognise symptoms and signs of hepatic failure.

9. Presentation and management of common breast diseases

Objectives:

- a. Demonstrates sound clinical approach to patients with breast lump, discuss the basic investigations and outline principles of treatment of each type.
- b. Discuss the management of different causes of nipple discharge.

10. Presentation and management of common surgical endocrine and exocrine gland diseases:

Objectives:

- a. Recognise the clinical approach to hyperparathyroidism and discuss their investigations and principles of treatment.
- b. Identify the different clinical presentations of suprarenal e tumours and discuss the principles of their management.
- c. Identify the clinical presentation of parotid and submandibular swellings.

11. Presentation and management of common anorectal conditions:

Objectives:

- a. Recognise the symptoms and signs of different perianal problems (piles, fissure and perianal fistula) and discuss the principles of their treatment.

12. Superficial swellings (lumps and bumps): a

Objectives:

- a. Recognise the different superficial lumps (lipoma, sebaceous cyst, ganglion, lymph node) and differentiate between them by history and physical examination.

(PEDIATRIC):

1. Presentation and management of common neonatal surgical emergencies

- a. Neonatal intestinal obstruction (upper)
 - i. congenital pyloric stenosis
 - ii. duodenal atresia/web/stenosis/annular pancreas
 - iii. malrotation/Ladd's band
 - iv. proximal jejunal stenosis/atresia

- b. Neonatal intestinal obstruction (lower)
 - i. distal small bowel atresia
 - ii. meconium ileus
 - iii. colonic atresia
 - iv. Hirschsprung's disease
 - v. Anorectal malformation

- c. Respiratory distress in neonates/small infants
 - i. Congenital diaphragmatic hernia
 - ii. Oesophageal atresia with TOF
 - iii. Congenital lobar emphysema
 - iv. Eventration of the diaphragm
 - v. Congenital cystic disease of the lung
 - vi. Upper airway obstruction

2. Presentation and management of acute abdomen in children

- a. Approach to patient with acute abdomen
 - i. history
 - ii. examination
 - iii. investigations
 - iv. differential diagnosis
 - v. management in brief

- b. Common causes like:
 - i. appendicitis
 - ii. intussusception
 - iii. malrotation
 - iv. twisted ovarian cyst
 - v. Meckel's diverticulitis

3. Management of pediatric inguinoscrotal conditions and acute scrotum

- a. Inguino-scrotal swelling**
 - i. inguinal hernia**
 - ii. hydrocele**
 - iii. undescended testis**
- b. Acute scrotum**
 - i. definition**
 - ii. causes**
 - 1. torsion of testes**
 - 2. torsion of appendage of testis**
 - 3. idiopathic scrotal edema**
 - 4. epididymo-orchitis**
 - 5. trauma**
 - 6. HS purpura**
 - iii. Investigations**
 - iv. Management in brief**

(PLASTIC):

- 1. Presentation and management of common peripheral nerve injuries**
 - i. Brachial plexus injuries.**
 - ii. Radial Nerve injuries.**
 - iii. Ulnar nerve injuries.**
 - iv. Median nerve injuries.**

- 2. Presentation and management of common congenital plastic and hand surgical diseases**
 - i. Hand diseases**
 - 1. fractures**
 - 2. tendon injuries**

 - ii. Congenital plastic diseases**
 - 1. cleft lip and lip**
 - 2. hand anomalies**

3. Presentation and management of common skin and soft tissue tumours

i. Benign lesion

1. moles/nevi
2. haemangioma
3. lymphoedema
4. Hydradenitis

ii. Malignant lesion

1. SCC
2. BCC
3. Malignant melanoma

(THORACIC):

1. Presentation and management of common oesophageal diseases.

- i. carcinoma of esophagus
- ii. achalasia
- iii. hiatus hernia

2. Presentation and management of common thoracic diseases.

- i. pneumothorax
- ii. pleural effusion
- iii. lung cancer
- iv. bronchiectasis

(CARDIAC):

1. Common cardiac surgical diseases.

- a. coronary artery disease
- b. rheumatic heart diseases
- c. atrial septal defects.

(NEUROSURGERY):

1. Raised intracranial pressure

a. pathophysiology of raised ICP

- i. normal/abnormal ICP**
- ii. intracranial compartments**
- iii. intracranial content**
- iv. mass shift**

b. causes

- i. infective masses**
- ii. tumours**
- iii. hematomas**
- iv. hydrocephalus**

c. presentation

- i. symptoms and signs of raised ICP**
- ii. symptoms and signs of transtentorial herniation**
- d. recognition and initial treatment of emergencies due to raised ICP.**

2. Common congenital neurosurgical diseases

a. conditions

- i. hydrocephalus**
- ii. spina bifida and related anomalies**

b. presentation:

- i. symptoms and signs of various conditions**

c. recognition and initial treatment of urgent congenital CNS anomalies

(VASCULAR):

1. Anatomical and pathophysiological review of vascular disorders.

- a. Learn about definition, pathogenesis and complication of atherosclerosis, R aneurysms and compartment syndrome.
- b. Learn about mechanism of interstitial tissue formation.
- c. Discuss the hemodynamics, pathophysiology and complications of arterio-venous fistula, chronic venous insufficiency and carotid artery stenosis
- d. Discuss about the pathogenesis and presentation of thoracic outlet syndrome.

2. Clinical presentation and management of acute and chronic ischemia.

Objectives:

- a. Learn about causes of acute and chronic ischemia
- b. Discuss symptoms and signs of acute and chronic ischemia
- c. Discuss the uses of Doppler and duplex angiogram for vascular assessment.
- d. Discuss the surgical and conservative treatment of ischemia (Thrombolysis, PTA).

3. Vascular investigations.

Objectives:

- a. Learn about indications, principles and application of vascular Doppler in ischemic patients including (ABI, segmental pressure, toe pressure).
- b. Learn about uses of vascular Doppler in venous disorders.
- c. Learn about principles, indications and complications of angiograms in vascular disorders.
- d. Learn about uses of CT, MRI in vascular diseases.

Presentation of the common urinary tract disorder:

Objectives:

- a) Identify systematic manifestation of renal disorders.
- b) Learn how to differentiate between local and referral renal and ureteric pain, and learn clinical signs of stones' disease, and urinary infections
- c) Learn about differential diagnosis of renal masses (hydronephrosis, renal tumours, renal abscess, renal cysts, perinephric hematoma)
- d) Learn an outline of investigations (KUB, IVP, U/S, CT)
- e) Learn an outline of the treatment of urolithiasis without going on details.
- f) Learn about symptoms related to the act of urination (frequency, nocturia, urgency, dysuria, enuresis).
- g) Learn about symptoms of bladder outlet obstruction (hesitancy, poor stream, urgency, acute urinary retention, chronic urinary retention, interruption of stream, sense of residual urine, cystitis).
- h) Learn about symptoms of urinary incontinence (full incontinence, stress incontinence, urge incontinence, overflow incontinence).
- i) Learn about symptoms related to the change in urine colour or smell (cloudy urine, hematuria, dysuria, bloody urine, idiopathic urethritis)
- j) Learn about clinical signs related to lower urinary tract disease (palpable bladder, bladder mass, rectal examination, prostatic signs).
- k) Learn about important neurologic signs related to urological diseases.
- l) Learn about symptoms and signs of benign prostatic hyperplasia and the prostate symptom score.
- m) Outline the treatment plan and natural course without going to specific details
- n) Learn about differential diagnosis of common scrotal disorder (testicular tumours, varicocele, hydrocele, hematocele, spermatocele).

Common urogenital tumours including adrenals:

Objective:

- a) Learn about the symptoms and signs of common urological tumours.
 - 1. Renal cell carcinoma of the kidney
 - 2. Transitional cell carcinoma of the bladder
 - 3. Adenocarcinoma of the prostate
 - 4. Testicular cancer
- b) Outline the needed investigations
- c) Outline the planning of management without going in the details.

Emergency in Urology:

Objective:

- a) Renal colic and obstructed kidneys
- b) Gross hematuria
- c) Priapism
- d) Acute scrotum
- e) Urinary retention
- f) Trauma