

STUDY GUIDE

PROGRAM	BDS
COURSE TITLE	General Surgery
ACADEMIC YEAR	3rd Year, 2023
INTRODUCTION	This course provides students with basic knowledge about the common surgical conditions that affect the community. Clinically essential topics like wound healing and repair, managing shock, common surgical infections and skills of suturing are emphasized. This course also provides an overview to the students of the myriad surgery-related conditions that patients present with.
RATIONALE	The discipline of Dentistry involves certain surgical procedures like tooth extractions. It is essential for the dental students to know how a number of surgical conditions present in the clinic and in tertiary care hospitals so that the students are able to identify and discuss management plans for them.
OUTCOMES	By the end of the course on General Surgery, 3 rd year BDS students will be able to justify the management of common surgical conditions
DEPARTMENT INVOLVED	General Surgery
COURSE OBJECTIVES	<p>By the end of the course, the students will be able to:</p> <p><u>PHYSIOLOGICAL RESPONSE TO SURGICAL TRAUMA AND HOMEOSTASIS</u></p> <ul style="list-style-type: none"> • Discuss homeostasis and the associated physiochemical and biochemical changes. • List mediators of metabolic response to injury • Discuss the avoidable factors that compound the metabolic response to injury. • Describe the physiological and biochemical changes in the body resulting from surgical trauma. <p><u>WOUND AND ITS REPAIR</u></p> <ul style="list-style-type: none"> • Discuss the types of wounds. • Discuss the phases of and factors affecting wound healing • Discuss healing by primary and secondary intention

- List various disorders of healing
- Discuss hypertrophic scars and keloids

PATHOPHYSIOLOGY AND MANAGEMENT OF SHOCK

- Discuss the pathophysiology, classical features and management of various types of shock

BLOOD TRANSFUSION

- Discuss various blood and blood products, its preparation and the procedure for transfusion
- Describe the indications and universal guidelines for blood transfusion.
- Discuss the management of transfusion reactions.

COMMON SURGICAL INFECTIONS

- Classify common surgical infections.
- Discuss the factors that determine the chances of wound infection and complicated wounds.
- Discuss the management of common surgical infections

SPECIAL SURGICAL INFECTIONS

- Discuss the etiology, pathophysiology, clinical presentation and management of gas gangrene and tetanus

BASIC SURGICAL SKILLS

- Describe common skin and subcutaneous tissues incisions.
- Discuss the surgical armamentarium and their sterilization and/or disinfection
- Discuss the techniques of wound closure
- Identify the surgical armamentarium
- Discuss uses of the surgical armamentarium

DIAGNOSTIC MODALITIES OF SURGICAL IMPORTANCE (HEMATOLOGICAL AND RADIOLOGICAL)

- List the common diagnostic modalities encountered in surgical practice.

- Select surgical case specific hematological and radiological modalities
- Justify the choice of surgical case specific hematological and radiological modalities.
- Discuss the management of complications pertinent to invasive investigative modalities

OPERATING ROOM PROTOCOLS

- Discuss the various methods of disinfecting and/or sterilizing operating rooms and their importance
- Discuss the basic principles of sterile and aseptic techniques used in the operating room.
- List the steps of scrubbing, gowning and gloving correctly

PRE-OPERATIVE CARE

- Describe in detail the pre-operative preparation of patient for surgery based on history, clinical examination and diagnostic findings as well as routine and specific pre-operative orders
- Discuss the risk factors affecting the patient's fitness for surgery
- Explain the prevention of postoperative complications.
- Discuss the pre-operative management of high-risk surgical patients
- Describe the steps of obtaining an informed consent

ANESTHESIA AND PAIN RELIEF

- Discuss pain and its pathways
- Classify local anesthesia
- Discuss the local, regional and general anesthesia techniques, and the actions and associated complications of anaesthetic drugs
- Describe the stages of general anesthesia and the monitoring of patients during anesthesia.

POST-OPERATIVE CARE

- Discuss the management of patient in recovery room and in surgical ward.

- Describe the procedural steps of following postoperative orders regarding intravenous fluids, antibiotics and analgesics
- Discuss the post-operative management of 'high-risk patients' presenting with diabetes, hypertension, renal and ischemic heart diseases, and asthma and other respiratory conditions.
- Describe the postoperative surgical complications, their clinical features, prophylactic measures and treatment.
- Describe the system of daily entries in patients' records and discharges

NUTRITION OF SURGICAL PATIENTS

- Discuss the causes and consequences of malnutrition in the surgical patient.
- Discuss indications of nutritional therapy (enteral and parenteral) and methods of nutritional support.
- Describe the types of feeding solutions and their relevant monitoring therapies
- List the complications and contra-indication of enteral and parenteral nutritional therapy
- Assess the nutritional deficiencies of surgical patients in the given case scenarios
- Calculate the calories requirement of surgical patients in the given case scenarios

FLUIDS AND ELCTROLYTES IN A SURGICAL PATIENT

- Discuss the daily requirements of fluids and electrolytes in an adult
- Describe the management of a surgical patient with impaired fluid and/or electrolytes

EARLY ASSESSMENT AND INITIAL MANAGEMENT OF TRAUMA

- Discuss principles of primary survey and resuscitation according to Advanced Trauma Life Support (ATLS) Protocols

FURTHER MANAGEMENT OF TRAUMA PATIENT

- Discuss the importance of AMPLE history taking in a patient with trauma and of secondary survey according to ATLS principles.

HEAD INJURIES

- Discuss the pathogenesis of different head injuries.
- Describe the process of assessment and categorization of a patient with head injuries according to the Glasgow Coma Scale (GCS).
- Discuss the investigations pertinent to diagnosis and management of head injuries and their interpretations
- Explain the principles of management of head injuries
- Interpret radiographs of patients presenting with head injury

MAXILLOFACIAL TRAUMA

- Describe the management of maxillofacial injuries.

SPINAL TRAUMA

- Describe the management of spinal injuries with especial reference to cervical spine

BURNS

- Discuss the types of burns and their mechanisms of injury
- Assess the surface area of burns according to the rule of 9 on pictures
- Describe the methods of calculating the fluid requirement.
- Describe the short- and long-term surgical management of burns.

PRINCIPLES AND MANAGEMENT OF SKIN AND SOFT TISSUES

- Define lump, ulcer, abscess, fistula and sinus.
- Discuss the various types, sign and symptoms and pathophysiology of common problems of skin and soft tissues.
- Discuss the standard procedure of diagnosing soft tissue lesions based on history and clinical examination
- List the investigations pertinent to common soft tissue lesions.
- Justify the management of common problems of skin and soft tissues

COMMON BENIGN AND MALIGNANT SOFT TISSUE LESIONS

- Discuss the pathophysiology, causes, clinical presentation, differential diagnosis and management of the following
 - benign skin lesions (nevus, hemangioma, pressure sores)
 - malignant skin lesions (malignant melanoma, basal cell carcinoma, squamous cell carcinoma)

CLEFT LIP AND PALATE

- Discuss the normal embryological development of cleft lip and palate.
- Discuss the types, etiology and associated features of developmental abnormalities of lip and palate.
- Discuss the management of cleft lip and palate and their associated problems

DISEASES OF THE SALIVARY GLANDS

- Describe pathophysiology and clinical features of various salivary gland diseases
- Discuss the management of common salivary gland disorders

NECK LUMPS

- Classify neck swellings according to the surface anatomy of the neck triangles
- Discuss the pathophysiology, clinical features, associated investigations and differential diagnosis of the following neck swellings:
 - congenital and acquired
 - inflammatory and non-inflammatory
 - midline and lateral
- Justify the management of neck swellings based on their locations and pathophysiology

THYROID AND PARATHYROID GLANDS

- Discuss the pathology, clinical features and management of the following conditions:
 - hyperthyroidism

	<ul style="list-style-type: none"> - hypothyroidism - thyroiditis - thyroid neoplasms - disorders of parathyroid glands <ul style="list-style-type: none"> • Discuss the indications, preparation and complications of thyroid surgery <p><u>VENOUS DISORDERS</u></p> <ul style="list-style-type: none"> • Discuss the causes, clinical features and management of DVT and thrombophlebitis <p><u>ARTERIAL DISORDERS</u></p> <ul style="list-style-type: none"> • Discuss the pathophysiology of aneurysm and gangrene
CLINICAL SKILLS	<p><u>HISTORY AND EXAMINATION</u></p> <ul style="list-style-type: none"> • Obtain history of patients presenting with swellings, thyroid disorders and ulcers following the standard protocols • Perform examination different groups of superficial cervical lymph nodes • Perform general physical examination on patients presenting to the OPD • Examine patients presenting with swellings, thyroid disorders and ulcers following the standard protocols • Palpate superficial arterial pulses following the standard protocol <p><u>BREAKING BAD NEWS</u></p> <ul style="list-style-type: none"> • Break bad news to patients and/or their attendees, according to the ethical guidelines <p><u>PROTECTIVE EQUIPMENT AND SUTURING</u></p> <ul style="list-style-type: none"> • Don & Doff personal protective equipment following the correct protocol • Demonstrate various types of surgical suturing and knotting techniques on synthetic models
INTERNAL ASSESSMENT	10% (Pre-professional Examination, Midterm Examination, Assignments and Class Presentations, Clinical Logbooks)

ANNUAL EXAMINATION	90% (MCQS, OSCE)
COURSE EVALUATION	This course will be evaluated as per JSMU & HEC policies