**Faculty of Medicine**

**Department of surgery**

**The academic department of obstetrics & gynecology**

1. **Al Qadisiyah medical collage**
2. **Sixth year of MBCHB program**

Allocated marks : 100 marks

Course duration : 12 weeks of teaching for each group of sixth year MBCHB program ( 4 groups , each group contains = 60 students and each group further subdivided into two subgroups which =30 students ) in form of 5 hours daily , for 5 days per a week ( from 8:00 AM to 2:00 PM ) followed by end term examination .

Final whole courses examination done at the end of 6th year .

Total teaching hours :

The teaching hours in 10 weeks course of sixth year program are 300 hours ( 5 day per week X 12 weeks ) .

**Course director** :

prof. Adel shaker mahmood

**Head of surgery department**

prof. Dr. Adel shaker mahmood

Teaching staff :

Professor : 8

Assistant professor : 8

**General Surgery**

**Course Specifications**

Al Qadissiyah University

Faculty of Medicine

Department of General Surgery

**Course title: General Surgery (Code):**

Departments offering the course:

o Departments of general surgery:

o Vascular surgery department

o Plastic surgery department

o Skill lab provided in the LRC

o Urology departments

o Orthopedic departments:

o Neurosurgery department

o Cardiothoracic surgery departments

o Aanesthesiology department

o Radiology department lecture hall.

sixth academic year of M.B.& B.Ch. program: 2022-2023

**Basic Information**

Allocated marks: 100

20 marks at the end of 12 week practical course

40 marks final written examination

40 marks final practical examination

Course duration: 12 weeks

Teaching hours: 360 hours

**Professional Information:**

**Vision**: We shall be guiding the region in surgical undergraduate education, , community service and research.

-**Mission:**Is to perk up the Iraq health status by graduating knowledgeable skillful and honorable doctors.

**Overall Aim of the Course:**

To provide the student with the knowledge, and skills which enable him/her to identify, analyze, manage and/or refer clinical surgical problems in order to provide efficient, cost effective and humane patient care.

To provide the student with an appropriate background covering the common and/ or important surgical emergencies.

To enable the student to detect cancer at an early stage.

To enable the development and application of appropriate professional attitudes, ethical principles and communication skills.

**Intended Learning Outcomes (ILOs):**

B.4.a- Knowledge and understanding.

On successful completion of the course, the student should be able to:

1. Recognize basics of surgical ethics.

2. Describe the anatomy of surgically important structures, organs and regions.

3. Describe the histology of surgically important tissues.

4. Describe the physiology of surgically important organs and systems.

5. Describe the principles of molecular biology and wound healing.

6. Describe the microbiology and parasitology of surgically important pathogens and their treatment.

7. Describe the first aid and definitive management of surgical emergencies.

8. Describe the principles of surgical nutrition.

9. Describe the principles of organ transplantation.

10. Describe the epidemiology, etiology, pathophysiology, pathology, complications and prognosis of the various common and important surgical diseases and disorders.

11. Describe the clinical picture, investigations and differential diagnosis of the various common and important surgical diseases and disorders.

12. Identify the principles of early detection of cancer.

13. Describe the prophylaxis and treatment of the various common and important surgical diseases and disorders.

14. Describe the pharmacological basis of surgically important medications.

15. Describe prevention of HCV and HIV transmission, sterilization of metal and non-metal instruments, handling and preservation of specimens, and management of disposables.

16. Describe the procedures and minimally-invasive techniques used in the treatment of surgical diseases.

17. Describe the principles of operative intervention including indications for intervention, preoperative preparation, principles of general and local anesthesia, principles of the operations, and postoperative care and complications.

18. Describe palliative care for untreatable surgical conditions.

19. Describe the theoretical basis of evidence based medicine (EBM).

20. Define principles of clinical audit.

**Practical and Clinical Skills**

On successful completion of the course, the student should be able to:

1. Provide first aid measures for injured and critically-ill patients.

2. Perform an emergency-directed examination for patients with common surgical emergencies.

3. Compose an initial plan of management for stabilization of injured and critically-ill patients.

4. Take and record a structured patient-centered history in acute and chronic conditions.

5. Perform full physical examination appropriate to age and gender in acute and chronic clinical conditions.

6. Construct appropriate management plan for patients with common and important surgical diseases.

7. Write safe prescriptions of different types of drugs.

8. Order appropriate investigations.

**Procedures and technical skills acquired under appropriate supervision during undergraduate training :** By the end of the program, the graduate will acquire the model-based skills ( using manikin and simulators) required to:

1. Perform venepuncture and collect blood samples.

2. Insert a cannula into peripheral veins.

3. Practice enteral, parenteral, inhalational and topical methods for drug administration.

4. Perform suturing of superficial wounds.

5. Demonstrate competency in cardiopulmonary resuscitation and basic life-support. (b 6. Administer basic oxygen therapy.

7. Insert a nasogastric tube.

8. Perform bladder catheterization.

9. Perform and interpret basic bedside laboratory tests.

10. Adopt suitable measures for safety and infection control.

**Professional Attitude and Behavioral Skills**

By the end of the program, the graduates will acquire the skills required to:

1. Adopt an empathic and holistic approach to patients and their problems, taking into consideration beliefs values, goals and concerns.

2. Respect the patient's right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.

3. Understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.

4. Recognize the important role played by other health care professions in patients' management, respecting their contributions in patient's management regardless of degree or occupation.

5. Apply the national code of ethics issued by the Iraqi Medical Syndicate.

6. Respect and follow the institutional code of conduct.

7. Counsel patients suffering from different conditions as well as their families.

8. Recognize one’s own limitations of knowledge and skills referring patients to appropriate health facility at the appropriate stage.

**Communication Skills:**

By the end of the program, the graduate will be able to:

1. Communicate clearly, sensitively and effectively with patients and their relatives and colleagues from a variety of health and social care professions.

2. Communicate effectively with individuals regardless of their social, cultural, ethnic backgrounds, or their disabilities.

3. Cope with situations where communication is difficult including breaking bad news.

4. Show compassion to patients and their relatives in situations of stress and grief.

5. Honor and respect patients and their relatives, superiors, colleagues and any other member of the health profession.

**Intellectual Skills**

By the end of the program, the graduate will acquire the skills required to:

1. Recognize patients with life/organ-threatening surgical conditions and perform appropriate initial therapy.

2. Determine the different strategies for risk management of disease and injury.

3. Identify surgically important structures and organs.

4. Identify surgical pathology specimens.

5. Integrate basic anatomical, physiological and pathological facts with clinical data.

6. Integrate the results obtained from history, clinical examination and investigational data into meaningful diagnostic formulation.

7. Combine clinical and investigational data with evidence based knowledge and skill of deductive reasoning for clinical problem solving.

8. Identify problems, prioritize them, and generate a list of differential diagnosis for each problem.

9. Select the most appropriate and cost-effective diagnostic and therapeutic procedure for each problem.

10. Use the results of all the tests ordered to modify the problem list and the differential diagnosis accordingly.

11. Identify and outline management of patients with surgical emergencies and common surgical diseases requiring long-term follow-up, rehabilitation and pain relief.

12. Recognize and cope with uncertainty by accepting and reacting to uncertain situations through proper counseling, consultation and referral.

**General and Transferable Skills**

By the end of the program, the graduate will acquire the skills required to:

1. Adopt the principles of lifelong learning needs of the medical profession.

2. Use computers efficiently in reaching biomedical information to remain current with advances in knowledge and practice.

3. Present information clearly in verbal, written, and electronic forms.

4. Communicate ideas and arguments effectively.

5. Work effectively within a multidisciplinary team.

6. Manage time and resources effectively and set priorities.

7. Apply simple statistical methods.

8. Apply English language as needed for appropriate learning and communication in relation to medicine.

**Specific Information:**

Teaching and learning methods:

Methods used:

1. Clinical classes

2. Lectures

3. Staff rounds

4. Illustrated lecture

5. skill laps

6. Tutorials

7. Emergency rounds

**List of references:**

Essential books (text books):

Bailey and Love’s Short Textbook of Surgery,

Norman Browse clinical surgery

Recommended books:

Schwartz Textbook of Surgery

Current Surgical therapy

Internet

**Facilities required for teaching and learning:**

Facilities used for teaching this course include:

▪ Lecture halls:

▪ Small group classes

▪ Skill lab

▪ Information technology / AV aids

▪ Library

▪ Wards

**Course topics (Minimal clinical cases required ) summary**

|  |
| --- |
|  |
| 1 Abdominal pain |
| 2 Abdominal swelling |
| 3 Change in bowel habit / rectal bleeding |
| 4 Vomiting blood |
| 5 Difficulty swallowing / dyspepsia /dysphagia |
| 6 Jaundice |
| 7 Lumps in groin |
| 8 Lumps in scrotum / scrotal pain |
| 9 Pain in loin |
| 10 Urinary retention or flow obstruction |
| 11 Haematuria (including stones and tumours) |
| 12 Leg ulceration |
| 13 Painful and/or paralysed limb |
| 14 Breast lumps and nipple discharge |
| 15 Lumps in the neck |
| 21 Fractures or dislocations with displacement or wound |
| 22 Fractures without displacement |
| 23 Swollen painful joint |
| 24 Back pain and/or sciatica (including cauda equina) |
| 25 Peripheral nerve injuries / palsies |
| 26 Raised intracranial pressure / intracranial blood clots and intracranial mass lesions |
| 28 Groin lump in child |
| 29 Consent for surgery including mental capacity |
| 30 Caring for the postoperative patient, including nutrition, enhanced recovery and the critically ill patient; advice re return to activities |
| 31 Understanding wound healing |
| 32 Trauma including head injury |
| 33 Sepsis and infection |
| 34 Surgical safety (WHO checklist, minimising complications, errors, communication and team-working) |
| 35 Caring for the patient before and after surgery, including fitness |

**Course topics (Minimal clinical cases required ) description**

|  |
| --- |
| 1. Abdominal pain |
| 1. Describe the symptoms, signs, and differential diagnosis for  patients presenting with an acute abdomen.  2. Discuss the investigations and management of patients with acute abdominal pain  (including conditions such as peritonitis, obstruction and pancreatitis).  3. Describe the pre and postoperative management of an acutely  unwell patient who requires emergency surgery.  4. Discuss the difficulties with fluid management and electrolyte  derangements, including oliguria and acute kidney injury.  5. State the essential pathology of: appendicitis, acute pancreatitis, acute  cholecystitis, abdominal aortic aneurysm and diverticular disease. |
| 2. Abdominal swelling |
| 1. Compare and contrast pathophysiological causes of abdominal  swelling and outline relevant investigations.  2. Describe the aetiology, presentation and management of intestinal obstruction.  3. Discuss the differential diagnosis, investigation and management  of patients presenting with a left iliac fossa mass.  4. Describe the pathophysiological causes of a swelling in the  epigastrium (including those arising from the liver).  5. Explain the appropriate imaging in the investigation of acute abdominal  pain including: plain radiography (erect chest X-ray and abdominal X-ray),  abdominal ultrasound scan, CT scanning and contrast studies.  6. List differential diagnoses for small bowel obstruction.  7. Summarise complications that can result from small bowel obstruction  including: ischaemia, perforation and biochemical derangement. |
| 3. Change in bowel habit / rectal bleeding |
| 1. Describe the blood supply to the lower gastrointestinal tract.  2. List potential causes of change in bowel habit.  3. List potential causes of rectal bleeding.  4. Summarise the aetiopathology of the common causes of change in bowel habit,  including: irritable bowel syndrome, coeliac disease, colorectal cancer, inflammatory  bowel disease, thyroid disease, diverticular disease and bowel obstruction.  5. Explain the aetiopathology of the common causes of rectal bleeding including: colorectal  cancer, diverticular disease, haemorrhoids, anal fissures and inflammatory bowel disease.  6. List the common causes of diarrhoea and constipation.  7. Recognise the signs and symptoms for colorectal cancer and its pathological development.  8. Explain the management for rectal bleeding, including relevant  investigations and the indications for surgical intervention. |
| 4. Upper gastrointestinal bleeding |
| 1. Assess and appropriately resuscitate a patient with acute GI haemorrhage.  2. State the aetiopathology of the common causes of upper GI bleeding including: duodenal ulcer,  gastric ulcer, gastric erosions, oesophageal varices, Mallory Weiss tear and oesphagogastric cancer.  3. Explain the role of oesophago-gastro-duodenoscopy (OGD) and  colonoscopy in the management of GI bleeding.  4. List the risk factors for upper GI bleeding and the role of the GP in its prevention.  5. Discuss the role and indication for investigations, interventional  radiology and surgery in the management of GI bleeding. |
| 5. Difficulty swallowing / dyspepsia /dysphagia |
| 1. Explain the terms dysphagia and dyspepsia.  2. Identify the different causes of dysphagia, including strictures,  malignancy, achlasia, and neurological causes.  3. Explain ‘red flag signs’ and the role of blood tests, endoscopy and  contrast studies in the assessment of dysphagia.  4. Explain the presentation of and risk factors for oesophageal cancer.  5. List the medical and surgical treatment of oesophageal cancer including palliative care.  6. State the NICE clinical guideline for managing new-onset dyspepsia.  7. List the different causes of dyspepsia and identify their risk factors.  8. Describe the different causes of gastro-oesophageal reflux disease.  9. Describe the Los Angeles classification of GORD.  10. Describe the conservative, medical and surgical treatment of GORD.  11. State how to investigate and treat *H. pylori*.  12. Describe the aetiology, pathogenesis and pathology of Barrett’s oesophagus.  13. Explain the management of Barrett’s oesophagus and its complications.  14. Describe a hiatus hernia. |
| 6. Jaundice |
| 1. Describe the physiology and anatomy of the liver and gallbladder.  2. List the causes of jaundice.  3. Describe the presentation of a patient with obstructive jaundice.  4. Explain the investigation and management of obstructive jaundice. |
| 7. Lumps in groin |
| 1. List possible causes of groin lumps including: hernias, lymph  nodes, saphena varix and femoral artery aneurysm.  2. Explain the anatomy of the inguinal canal with respect to the presentation and management of hernias.  3. List the different types and causes of hernias, and describe  their surgical and non-surgical management.  4. Discuss the complications of hernia surgery. |
| 8. Urol  Lumps in scrotum / scrotal pain |
| 1. Describe the anatomy of the testes including blood supply and contents of the spermatic cord.  2. Diagnose the different causes of scrotal lumps/swelling/pain including: varicocele,  hydrocele, epididymal cysts, epididymo-orchitis, testicular torsion, hernias and cancer.  3. List the investigations that should be performed in patients presenting with scrotal lumps/swelling/pain.  4. Recognise testicular torsion as a urological emergency and understand its management.  1. Describe the symptoms and signs that can be used to distinguish  between the different causes of loin pain.  2. State the role of urine microscopy and bedside urinalysis in determining the cause of loin pain.  3. Describe the role of a CT KUB in identifying radio-opaque renal stones,  and the role of ultrasound in identifying hydronephrosis.  4. Discuss the role of conservative management and interventions,  including lithotripsy, in managing renal calculi.  5. List the risk factors, aetiology, treatment and complications of acute pyelonephritis.  6. Explain the diagnosis, assessment and treatment of tumours arising within the urinary tract. |
| 9. Urinary retention or flow obstruction |
| 1. Explain the anatomy of the male urinary tract and the physiology of voiding.  2. Classify the causes of urinary outflow obstruction by the site of obstruction:  a. Within the lumen  b. Within the wall  c. Extrinsic compression  3. Distinguish between the symptoms of upper and lower urinary tract obstruction.  4. Describe the range of laboratory tests and imaging techniques used in the investigation  of patients with urinary outflow obstruction, in particular the role of the PSA test.  5. Explain the pathology of the following common causes of urinary tract  obstruction, and their medical or surgical management:  a. Urinary tract calculi  b. Benign prostatic hyperplasia  c. Malignant tumours of the urinary tract.  6. State the complications of untreated urinary tract obstruction. |
| 10. Haematuria |
| 1. Define and classify microscopic and macroscopic haematuria, and  be able to describe the common causes of each.  2. State the NICE urgent referral guidelines for haematuria.  3. Interpret the results of a urine dipstick test in a patient with haematuria.  4. Discuss the range of laboratory tests and imaging techniques used in the  investigation of patients with haematuria, and their specific indications.  5. Explain the pathology of the following common causes of haematuria,  as well as their medical and surgical management:  a. Infective: cystitis; pyelonephritis; prostatitis; urethritis  b. Urinary tract calculi  c. Benign prostatic hyperplasia  d. Malignant tumours of the urinary tract  e. Glomerular diseases  f. Polycystic kidney diseases. |
| 11. Leg ulceration |
| 1. List causes of chronic leg ulcers and describe differences in appearance.  2. Compare and contrast the presentation of venous and arterial leg ulcers.  3. Describe the pathogenesis of ischaemic, venous and diabetic ulcers.  4. Discuss appropriate investigations and treatment options for a patient with chronic leg ulcers including:  a. management of underlying cause  b. dressings and bandaging  c. reconstruction.  5. Describe the gangrene associated with chronic ischaemia. |
| 12. Chronic Limb Ischaemia: |
| 1. Describe the symptoms and signs of chronic limb ischaemia.  2. Describe the pathogenesis of peripheral vascular disease.  3. List risk factors for the development of peripheral vascular disease and  describe how each of these can be looked for and controlled.  4. Describe the investigations that should be performed to determine the  presence and severity of peripheral vascular disease.  5. Discuss with a patient on improving symptoms, slowing progression and  preventing complications of peripheral vascular disease.  6. List indications for percutaneous transluminal angioplasty and arterial reconstruction surgery.  7. Describe the percutaneous transluminal angioplasty and arterial  reconstruction surgery to a patient, including risk of complications.  8. Discuss indications for limb amputation.  9. Describe types and process of limb amputation and list possible complications.  10. Discuss rehabilitation for patients following limb amputation and list mobility aids available.  11. Explain the options available for pain control and palliative support  in a patient with intractable limb ischaemia. |
| 13. Acute Limb Ischaemia: |
| 1. Describe the symptoms and signs .  2. Discuss mechanisms leading to acute limb ischaemia.  3. Explain the nature and timing of pathological changes that will occur in  an acutely ischaemic limb if the ischaemia is not relieved.  4. Describe the emergency investigation of a patient with acute limb ischaemia.  5. Discuss the options available for emergency management of acute limb ischaemia  including anticoagulation, thrombolysis, angioplasty and embolectomy.  Compartment Syndrome:  1. Explain symptoms, signs, pathogenesis and management. |
| 14. Breast lumps andnipple discharge |
| **1. Describe the anatomy of the breast including blood supply, venous drainage and lymphatics.**  **2. Analyse presenting symptoms and management of benign breast disease.**  **3. Explain the rationale in treatment decisions for patients with genetic predisposition to cancer.**  **4. Discuss how and when to take a family history and to request genetic tests, to discuss**  **the significance of this and how this guides surveillance and gene testing.**  **5. Explain the patient pathway for breast screening and subsequent cancer management,**  **including one-stop clinics, triple assessment and multidisciplinary team management.**  **6. Identify staging of breast cancer including the principles behind sentinel node biopsy.**  **7. Explain different types of surgical operations available and indications**  **for mastectomy and breast conservation operations.**  **8. Describe the scientific basis for current breast cancer therapies.**  **9. Define the principles behind adjuvant / hormone therapy and radiotherapy.**  **10. Explain the need and indications for oncoplastic breast surgery.**  **11. List the reconstructive options available to patients undergoing mastectomy.**  **1 Describe the aetiology and pathology of common benign and malignant lumps occurring in the** |
| 15 . Fractures or dislocations with displacement or open wound |
| 1. State the general principles of fracture management.  2. Describe and classify different types of fractures.  3. Describe radiological principles in fracture diagnosis.  4. List complications from fractures.  5. Describe the basic surgical management fractures, including femoral neck fractures.  6. Describe the management of a dislocated joint.  7. Explain the management of open fractures and soft-tissue injury necessitating reconstructive surgery. |
| 16. Management of fracture |
| 1. Describe the cellular process of fracture healing.  2. Describe the principles behind the general management of a fracture.  3. Explain the differences between different types of undisplaced fractures, eg stress, paediatric.  4. Summarise the concept of ‘stability’ of a fracture; explain that  undisplaced fractures may not be benign fractures.  5. Describe the soft tissue component of a fracture. |
|  |
| 17. Swollen painful joint |
| 1. Describe the differential diagnosis of a swollen joint, including osteoarthritis, gout, pseudo  gout, rheumatoid arthritis, neuropathic arthritis, septic arthritis and traumatic causes.  2. List the common pathological processes of a swollen joint.  3. Describe the systematic manifestations with some swollen joints.  4. State the logical assessment and principal investigations for patients with swollen joints.  5. Explain the emergency nature of an infected joint.  6. Describe the different management approach for native and prosthetic joints with infections.  7. Describe the principal non-operative and operative treatments of a swollen joint.  8. Summarise common complications of joint replacement surgery and how they might present. |
| 18. Back pain and/or sciatica (including cauda equine syndrome) |
| 1. List the common causes of back pain.  2. Describe red and yellow flag signs.  3. Discuss the causes of back pain, including mechanical, non-mechanical,  inflammatory and other causes, as well as vertebral fractures and neoplasia.  4. Describe the clinical examination and investigations for back  pain, including where there is nerve involvement.  5. Identify patients who may need referral to physiotherapy or similar therapy.  6. Describe the indications for imaging and for surgical management of back  pain, particularly emergency surgical management of back pain.  7. Discuss the impact of chronic back pain on the individual, their family and society. |
| 19. Peripheral nerve injuries / palsies |
| 1. Describe the cellular process of peripheral nerve injuries.  2. List the different causes of peripheral nerve palsies and describe  the Seddon Classification of peripheral nerve injury.  3. Compare and contrast symptoms and management of different mechanisms of peripheral  nerve injury (eg the difference between upper and lower motor nerve lesions).  4. Describe the anatomy of the brachial plexus and its terminal branches.  5. Describe the dermatomal arrangement and corresponding terminal  branches of sensory innervation to upper and lower limbs.  6. Explain compartmental motor innervation of the upper and lower limbs and important exceptions.  7. Describe physical features of radial, ulnar, medial and brachial plexus  injuries, carpal tunnel syndrome and cubital tunnel syndrome.  8. Describe physical features of peroneal injuries and other causes of foot drop. |
| 20. Raised intracranial pressure / Intracranial blood clots and intracranial mass lesions |
| 1. List the symptoms and signs of raised intracranial pressure (eg vomiting).  2. Describe the pathophysiology of raised intracranial pressure (including the Munro-Kelly doctrine).  3. Explain the assessment of a patient with possible raised intracranial  pressure, intracranial blood clot or mass lesion.  4. Describe monitoring and interventions that may be possible, including decompressive craniotomy.  5. Describe hydrocephalus, its causes and treatment including shunts and external drainage.  6. Summarise sub arachnoid haemorrhage.  1. List the symptoms and signs of raised intracranial pressure (eg vomiting).  2. Describe the pathophysiology of raised intracranial pressure (including the Munro-Kelly doctrine).  3. Explain the assessment of a patient with possible raised intracranial  pressure, intracranial blood clot or mass lesion.  4. Describe monitoring and interventions that may be possible, including decompressive craniotomy.  5. Describe hydrocephalus, its causes and treatment including shunts and external drainage.  6. Summarise sub arachnoid haemorrhage |
| .  21. Groin lump in child |
| 1. Assess and initiate management of a child presenting with groin pathology (including  undescended testis, hernia, hydrocele and painful swellings of the genitalia),  including appropriate communication with relevant family or carers.  2. Distinguish, through the history, physical examination and laboratory testing, testicular torsion,  torsion of testicular appendices, epididymitis, testicular tumour, scrotal trauma and hernia.  3. Appropriately order imaging studies to make the diagnosis of the acute scrotum.  4. Determine which acute scrotal conditions require emergency surgery  and which may be handled less urgently or electively.  5. Explain the descent of the testicles from the abdomen into the scrotum with the  anatomical structures in this path of descent (eg, tunica vaginalis, epididymis).  6. Differentiate testicular tumour from a mass of inguinal origin (not possible to get above it, may  reduce), cystic lesion (trans-illuminates), and a varicocele (easier to palpate with patient erect).  7. Describe the anatomy of the inguinal canal. |
|  |
| 22. Consent for surgery including mental capacity |
| 1. Explain the need for informed consent.  2. Apply the principles of informed consent.  3. Describe the elements necessary for mental capacity to give informed consent.  4. Check for mental capacity, and recognise when an individual does not have capacity to give consent.  5. State the importance of written documentation, both for giving consent and  documenting the information given to the patient and their supporters.  6. List the exceptional circumstances when you can rely on oral consent, and the need to document this.  7. List the common risks associated with all surgery (for example blood  loss, infection and reaction to drugs used in surgery).  8. Describe the potential risks and benefits for common surgical procedures. Be  able to change your explanation to ensure patient understanding.  9. Discuss issues with consent in children, how to assess competence and what  steps to take if the parents’ wishes are not in the best interests of the child.  10. Select and know how to complete the appropriate consent form for adults,  children, patients lacking capacity and local anaesthetic cases. |
|  |
| 23. Caring for the postoperative patient, including nutrition, enhanced recovery and the critically ill patient; advice re return to activities |
| 1. Describe the major fluid compartments of the body, the effect of osmolality and explain what may  happen in common conditions (eg acute blood loss, dehydration, excessive fluid replacement).  2. Describe the clinical (bedside) assessment of hypovolaemia and hydration.  3. Discuss the rationale for routine intravenous fluid replacement in surgical  patients and describe the commonly prescribed intravenous fluids.  4. Discuss the principles of blood transfusion of a surgical patient.  1. Describe the process and stages of wound healing.  2. State primary, secondary and tertiary wound healing.  3. Explain the reasons for conducting a wound assessment.  4. Identify wound bed tissue types.  5. Describe the skin surrounding the wound and how this gives you information  about the underlying disease and the effectiveness of current treatments.  6. Measure a wound.  7. State the need to assess pain in wound care.  8. Explain extrinsic and intrinsic factors which impact on wound healing eg nutrition.  9. State the basic principles of wound dressing.  10. Identify patients at risk of pressure sore development using the Waterlow score.  11. Summarise pressure ulcer classification. |
|  |
| 24. Trauma |
| 1. List the interventions that may be required for head injury.  2. Explain the importance of nerve or vessel injury in trauma.  3. Describe the physiological response to injury.  4. State the principles of surgical treatment in a multi-injured patient.  5. Assess priorities during all phases of management following *ATLS* principles.  6. Know the importance of re-assessment of the patient with regards to earlier interventions.  7. Know the meaning and significance of a patient with polytrauma.  8. Discuss issue of missed injuries, management and documentation.  9. Explain primary and secondary survey.  10. Define triage and its importance.  11. State the importance of analgesia in the management of these patients.  12. Explain the different mechanisms of trauma injury (blunt v penetrating v crush v blast).  13. Discuss the importance of a continuum of care for the injured patient by a  multidisciplinary team in which responsibility is actively shared.  14. Explain the importance of the *ATLS* strategy and systematic approach: rapid  primary survey, concurrent resuscitation, secondary survey, continued reevaluation  and monitoring, investigation and definitive care.  15. Explain the role of radiological investigations (eg CT scanning) and interventions.  16. Explain the role of investigation and treatment is dependent on the haemodynamic status of the patient |
| 25. sepsis |
| 1. Define the following terms: systemic inflammatory response syndrome (SIRS), sepsis,  severe sepsis, septic shock, and acute respiratory distress syndrome (ARDS).  2. Differentiate between SIRS, sepsis, severe sepsis and septic shock.  3. Explain the seriousness of sepsis.  4. Describe the typical clinical presentation, including signs, symptoms, vital signs,  haemodynamic measures and laboratory tests, for each condition above.  5. Describe the microbiological causes of sepsis.  6. Describe the pathophysiology and mechanism of sepsis.  7. Describe the priorities for treatment of sepsis.  8. Give a description of a patient with sepsis, and select the most appropriate treatments.  9. Determine appropriate fluid resuscitation for sepsis with colloids or crystalloids.  10. Recommend an appropriate antibiotic regimen for treatment of sepsis  based on patient characteristics and site of primary infection.  11. Explain the role of vasoactive agents in supporting the physiological function of a patient with  sepsis, and be able to select the appropriate agent, given details of a patient’s condition.  12. Describe an appropriate monitoring programme for patients with sepsis.  13. List the principles of diagnosis and management of sepsis.  14. State when to involve the infection control team.  15. State when to take appropriate microbiological specimens.  16. Follow local guidelines/protocols for antibiotic prescribing.  17. Carry out Sepsis 6 (BUFALO) recommendations within the first hour to reduce mortality (Sepsis UK)  **B – blood cultures**  **U – urine output**  **F – fluid**  **A – antibiotics**  **L – lactate (and haemoglobin)**  **O – oxygen** |
| 26. Surgical safety |
| 1. Discuss the importance of a culture of safety: WHO checklist, minimising complications,  learning from errors, communication and team-working, mortality and morbidity (M&M)  meetings and how to manage a complication with the patient and family.  **Fluid optimisation**  1. Identify patients in need of fluid optimisation, especially pertaining to:  • acute presentations with diarrhoea and vomiting  • acute presentations where the patient has been immobile / debilitated for a  prolonged period prior to admission (which has decreased fluid intake)  • elderly patients with reduced renal function that makes fluid  balance maintenance more challenging  • drugs that lower renal fluid exchange functions  • low BMI patients in whom ‘normal’ fluid loss volumes will be more significant.  2. Recognise the different types of fluid used for optimisation, especially  Hartmann’s, Normal 0.9% Saline and Dextrose.  3. Determine the correct volume and rate of administration.  4. Assess the volume of body fluid depletion, and how to administer fluid resuscitation to patients  especially according to them being elderly / unfit / with impaired cardiac and/or renal function.  5. Monitor the progression of fluid optimisation.  **Nutritional optimisation**  1. Identify patients in need of nutritional optimisation, especially pertaining  to BMI, serum albumin, frailty or triceps skin fold thickness.  2. List the physiological effects of protein–calorie malnutrition.  3. Identify the different types of nutritional support – oral, nasogastric, gastro/jejunostomy and parenteral.  4. Describe what total parenteral nutrition (TPN) entails, its associated risks, and  the additional and particular parameters of care for these patients.  **Safety Issues and Booking Patients for surgery**  1. List the administrative steps to book a patient into the operating theatre and most  recent investigation results (as well as drug chart and consent form details).  2. Describe the details of operative site marking.  3. Explain details of any specific patient preparation including whether cross matched blood is needed.  4. List the different types of bowel preparation indicated for operations  to the large bowel or its surrounding tissues.  5. Describe the principles of and drugs used for anaesthetic premedication. |
| **27. Antibiotic Thromboprophylaxis** |
| 1. Explain the principles behind antibiotic prophylaxis (including the specifics  relating to high-risk patients) and the typical course duration.  2. State the standard prophylactic regimens established for particular operative procedures, and  appreciate that these may be specific to the individual hospital trust policies and protocols.  3. Identify the types of thromboprophylaxis – mechanical, drugs (heparin /  LMWH + doses), and antiplatelet or indirectly acting medications.  4. Identify the group of patients at highest risk for deep vein thrombosis.  5. Discuss the factors such as the specific procedure as well as the specific comorbidities that increase  risk, and subsequently categorise patients according to these as low, medium or high risk. |
| **28. The aims of pre-operative assessment** |
| 1. Including explaining procedures, their associated risks and aftercare  so that patients can make informed decisions.  2. Identifying co-existing medical conditions and how to optimise the patient’s  health, while appreciating the urgency of their operation.  3. Discuss improvable factors to help support patients to be as fit as possible (including smoking  cessation, reducing alcohol, better nutrition and taking regular moderate physical exercise).  4. Identify patients with a high risk of perioperative complications and  identifying their appropriate level of postoperative care.  5. Describe the process of discharge planning.  6. Identify the variables that provide prognostic information for all patients planning to undergo surgery. |
| 29. Preoperative preparation  **Explain the details of the preoperative anaesthetic history and assessment, including**  **airway assessment, previous anaesthesia exposure (and any adverse reactions)** |
| 1. List the basics of the ASA (American Society of Anaesthesiologists) Classification  especially pertaining to individual comorbidities (such as angina, hypertension,  diabetes, COPD, asthma) and understand that this accurately predicts morbidity  and mortality or more broadly the ‘fitness of patients’ prior to surgery.  2. State the basics of assessing functional capacity and mouth opening.  **Pre-operative Investigations**  Identify the essential pre-operative investigations required for all surgical patients, including: blood tests  (FBC, U+Es, creatinine) and ECG, also pregnancy test, sickle cell test and chest x-ray if appropriate.  1. Identify and explain the more specific pre-operative investigations required for individual  patients according to condition, comorbidities or procedure being performed.  2. State the basic fasting guidelines for children and adults.  3. Explain the essential management of associated medical conditions, especially pertaining to the  following conditions:  difficult airway, obesity, cardiac disease, respiratory disease, gastrointestinal disease,  renal failure, diabetes, haematological disorders, obstructive jaundice, anaemia, sickle  cell anaemia, allergic reactions, and those rendering patients at high risk; includes the  appropriate additional investigations for specific illnesses – such as cardiopulmonary  exercise testing to evaluate both cardiac and pulmonary function, as well as survival  prediction indices – age, socioeconomic status and aerobic fitness. |

**Log book**