Surgery: Passing Requirements

Courses and Practicals with mandatory attendance
a) Clinical practical course „Surgery“ (8th semester) Tuesday 2.00-4.00 pm
b) Concomitant courses
   Trauma lecture Monday 8.15-9.00 am
   General Surgery lecture Tuesday 8.15-9.00 am
   Wednesday 8.15-9.45 am
   Thoracic Surgery lecture Thursday 8.15-9.00 am
c) Major course evaluation
   Supervised interdisciplinary examination (together with Orthopedics and Urology), at
   the end of the 8th semester, with open and mc-questions.
   Surgery (General Surgery, Trauma and Thoracic Surgery): 60 questions. Orthopedics:
   30 questions. Urology: 30 questions.
General Surgery: List of learning targets

1 General surgical issues

1.1 Indications and contraindications of surgical procedures
   Intended results of surgical procedures
   Optimal timing for operative procedures
   Informed consent
   Expected prognosis of surgical therapy and alternative treatments
   Preoperative preparation
   Choosing the type of anesthesia
   Fundamentals of medicolegal issues

1.2 Hygienic requirements for operative procedures
   Asepsis and Antisepsis
   Septic procedures
   Prophylactic perioperative antibiotics
   Nosocomial infections

1.3 Surgical principles and techniques
   Basic terminology
   Surgical instruments and suture materials

   Surgical incisions
   Haemostasis
   Suturing techniques
   Percutaneous punctions
   General principles for the use of drainages
   Solid organ transplantation
   Perioperative pathophysiology
   Preoperative assessment and therapy: risk factors
   Transfusion of blood products
   Prophylaxis of thromboembolism
   Postoperative and posttraumatic metabolism
   Postoperative therapy, follow up and rehabilitation

1.4 Normal and impaired wound healing
   Wounds, woundhealing and wound therapy

1.5 Surgical infections (and surgical site infections)
   Terminology
   Putrid infections: symptoms, diagnosis and therapy
   Emphysematous gangrene and tetanus
   Rabies, viral hepatitis, AIDS, and other bacterial and viral infections
   Parasitic infections

1.6 Shock (see also Anesthesia and Emergency Medicine)

1.7 Diagnosis, classification and treatment of malignant tumors
   Alarming clinical symptoms
   Cancer screening: Examinations and laboratory tests
Staging of tumor disease
Classification of malignant tumors
Surgical principles for malignant diseases
Interdisciplinary approach for malignant diseases
Estimation of prognosis
Follow up of the cancer patient

2 Specific surgical issues

2.1 Thyroid gland
Surgical anatomy
Goiter
Thyreoid adenoma
Thyreoid carcinoma
Thyroiditis
Complications of thyreoid surgery

2.2 Parathyreoid gland
Hyperparathyreoidism
Hypoparathyreoidism

2.3 Esophagus
Surgical anatomy
Atresia
Esophageal diverticula
Hiatal hernia, gastroesophageal reflux disease, achalasia
Tumors
Esophageal trauma
Bleeding of esophageal varices

2.4 Diaphragm
Diaphragmatic malformations
Rupture of the diaphragm

2.5 Stomach and duodenum
Surgical anatomy, pathophysiology and embryological malformations
Peptic disease, perforation, upper gastrointestinal bleeding
Tumors

2.6 Small bowel
Surgical anatomy, embryological malformations (atresia and stenosis)
Crohn’s disease
Mesenterial ischemia
Short bowel syndrome
Tumors
Small bowel trauma

2.7 Colon
Surgical anatomy
Acute appendicitis
Ulcerative colitis, Crohn’s disease
Diverticulosis and diverticulitis
Tumors
Genetic predispositions for colon cancer (FAP, HNPCC)

2.8 Rectum and anus
Surgical anatomy and malformations
Haemorrhoids, fissure, anal fistula, perianal abscess
Motility disorders, prolapse of the rectum
Malignant diseases

2.9 Liver
Surgical anatomy and anatomical variations
Hepatic function disorders
Liver abscess, echinococcosis, amoebiasis
Liver tumors
Hepatic trauma

2.10 Gallbladder and bile ducts
Surgical anatomy
Cholecystolithiasis
Cholecystitis and cholangitis
Cholestatic syndrome
Tumors

2.11 Pancreas
Surgical anatomy and malformations
Acute and chronic pancreatitis
Pancreatic cysts
Pancreatic tumors
Pancreatic trauma

2.12 Adrenal gland
Surgical anatomy
Diseases of the adrenal gland
Pheochromocytoma

2.13 Spleen
Surgical anatomy and variations
Spleen disorders
Splenic injury

2.14 Hernia
Surgical anatomy and embryology
Groin hernia and femoral hernia
Umbilical hernia
Incisional hernia

2.15 Acute abdomen
Clinical findings and diagnostic procedures
Peritonitis
Ileus
3 Vascular Surgery

3.1 Arterial disease
Anatomy and physiology
Injuries
Acute ischemia
Chronic peripheral occlusive arterial disease
Carotid stenosis
Vascular disorders of the abdominal organs
Aneurysma
Angiodysplasia
Vasculitis

3.2 Venous disorders
Thrombophlebitis
Deep vein thrombosis and pulmonary thromboembolism

3.3 Lymphatics
Regio-specific lymphatic anatomy
Sentinel lymphnode
Lymphnode biopsy and lymphnode-dissection
Lymphedema
Lymphangitis

4 Pediatric Surgery

4.1 Principles
Definitions in pediatric surgery
Diagnosis: propedeutics, prenatal-diagnostics, radiology
Intravenous therapy and nutrition
Infections

4.2 Atresia, stenosis and functional disorders of the gastrointestinal tract
Esophageal atresia
Duodenal atresia and stenosis, hypertrophic pyloric stenosis
Atresia of the small and large bowels, meconium ileus
Atresia of the rectum an anus, perianal fistulas
Atresia of the biliary tree
Hirschsprung’s disease
Chronic obstipation
Crohn’s disease
Ulcerative colitis

4.3 Defects of the abdominal wall and hernia
Gastroschisis
Omphalocele
Diaphragmatic hernia
Groin hernia
Umbilical hernia
4.4 Disorders of the urinary system
- Hypospadia
- Testicular torsion
- Dislocation of the testis
- Varicocele
- Phimosis

4.5 Emergency
- Differential diagnoses of the acute abdomen
- Necrotizing enterocolitis
- Meconium ileus
- Volvulus
- Invagination
- Acute appendicitis
- Ileus

4.6 Malformations of the chest
- Funnel chest
- Keeled chest

4.7 Paediatric tumors
- Nephroblastoma (Wilm’s tumor)
- Neuroblastoma

4.8 Bone fractures

4.9 Burn injury