

MASTER OF PHILOSOPHY DEGREE IN EMERGENCY MEDICINE



UNIVERSITY OF CAPE TOWN CURRICULUM CORE CONTENT – MPhil.EM

The Core Content for Emergency Medicine was developed to outline the material at risk for testing in the examinations that will be offered and to lend guidance to those learning the specialty.

A South African curriculum which is most relevant to the needs of South African patients and practitioners of Emergency Medicine has been developed, taking into consideration our patient profiles in regards to pathology presented to our Emergency Centres country wide. The quadruple burden of disease (HIV/ AIDS, Infectious disease, Lifestyle disease and trauma) has significant impacts on our Emergency Centres, and are specific to our part of the world.

The Core Content represents the scope of emergency medicine practice. As such, it is quite inclusive, even of disease entities that are rare. The Core Content has logically become the basis for the curriculum.

Emergency Medicine Core Content

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Emergency Medicine Core Content

1. ABDOMINAL AND GASTROINTESTINAL DISORDERS

1.1. Oesophagus

1.1.1. Motor abnormalities

- 1.1.1.1. Oesophageal spasm
- 1.1.1.2. Achalasia

1.1.2. Structural disorders

- 1.1.2.1. Varices
- 1.1.2.2. Rupture (Boerhaave's syndrome)
- 1.1.2.3. Perforation
- 1.1.2.4. Tears (Mallory-Weiss syndrome)
- 1.1.2.5. Haematoma
- 1.1.2.6. Foreign body
- 1.1.2.7. Diaphragmatic hernia
- 1.1.2.8. Diverticulae
- 1.1.2.9. Hiatus hernia
- 1.1.2.10. Webs, strictures, stenosis

1.1.3. Inflammatory disorders

- 1.1.3.1 Reflux oesophagitis
- 1.1.3.2 Caustic injury

1.1.4. Infectious disorders

- 1.1.4.1 Herpetic oesophagitis
- 1.1.4.2 Monilial oesophagitis

1.1.5. Tumours

1.2. Liver

1.2.1. Hepatitis

- 1.2.1.1. Viral
- 1.2.1.2. Bacterial
- 1.2.1.3. Parasitic
- 1.2.1.4. Drug and toxin
- 1.2.1.5. Alcoholic
- 1.2.1.6. Prophylaxis

Emergency Medicine Core Content

1.2.2. Cirrhosis

- 1.2.2.1. Alcoholic
- 1.2.2.2. Viral
- 1.2.2.3. Biliary obstructive
- 1.2.2.4. Drug induced
- 1.2.2.5. Toxin induced

1.2.3. Hepatic/ hepato-renal failure

1.2.4. Abscess

- 1.2.4.1 Primary abscess
- 1.2.4.2 Metastatic abscess

1.3. Gall Bladder and Biliary Tract

1.3.1. Cholecystitis

1.3.2. Cholangitis

1.3.3. Cholelithiasis and choledocholithiasis

1.3.4. Gallstone ileus

1.3.5. Tumours

1.4. Pancreas

1.4.1. Inflammatory

- 1.4.1.1. Acute pancreatitis
- 1.4.1.2. Chronic pancreatitis
- 1.4.1.3. Pseudocyst

1.4.2. Tumours

- 1.4.2.1. Islet cell tumours

1.4.2.2. Carcinoma

1.5. Stomach

1.5.1. Structural lesions

- 1.5.1.1. Volvulus
- 1.5.1.2. Foreign bodies
- 1.5.1.3. Rupture
- 1.5.1.4. Gastric outlet obstruction

Emergency Medicine Core Content

1.5.2. Inflammatory disorders

- 1.5.2.1. Acute gastritis
- 1.5.2.2. Stress-related gastritis
- 1.5.2.3. Corrosive gastritis

1.5.3. Peptic ulcer disease

- 1.5.3.1. Duodenal ulcer
- 1.5.3.2. Gastric ulcer
- 1.5.3.3. Acute gastrointestinal haemorrhage

1.6. Small Bowel

1.6.1. Motor abnormalities

- 1.6.1.1. Obstruction
 - 1.6.1.1.1. Mechanical
 - 1.6.1.1.2. Adynamic

1.6.2. Structural disorders

- 1.6.2.1. Mesenteric vascular disease
- 1.6.2.2. Aorto-enteric fistula

1.6.3. Infectious disorders

- 1.6.3.1. Viral
- 1.6.3.2. Bacterial
- 1.6.3.3. Parasitic

1.7. Large Bowel

1.7.1. Motor abnormalities

- 1.7.1.1. Irritable bowel

1.7.2. Structural disorders

- 1.7.2.1. Diverticular disease
- 1.7.2.2. Volvulus

1.7.3. Inflammatory disorders

- 1.7.3.1. Ulcerative colitis
- 1.7.3.2. Radiation colitis
- 1.7.3.3. Appendicitis
- 1.7.3.4. Diverticulitis
- 1.7.3.5. Crohns disease

Emergency Medicine Core Content

- 1.7.4. Infectious disorders
 - 1.7.4.1. Bacterial
 - 1.7.4.2. Viral
 - 1.7.4.3. Parasitic
 - 1.7.4.4. Antibiotic associated
 - 1.7.4.5. Gay bowel syndrome

1.8. Rectum and Anus

- 1.8.1. Structural disorders
 - 1.8.1.1. Anal fissure
 - 1.8.1.2. Anorectal fistula
 - 1.8.1.3. Haemorrhoids
 - 1.8.1.4. Rectal prolapse
 - 1.8.1.5. Foreign body
 - 1.8.1.6. Peri-anal warts
 - 1.8.1.7. Peri-anal abscess

- 1.8.2. Inflammatory disorders
 - 1.8.2.1. Proctitis

1.9. Abdominal Wall/Peritoneum

- 1.9.1. Hernias
- 1.9.2. Rectus haematoma
- 1.9.3 . Bacterial peritonitis

1.10. Infectious Disorders

- 1.10.1. Bacterial
- 1.10.2. Viral
- 1.10.3. Parasitic

Emergency Medicine Core Content

2. CARDIOVASCULAR DISORDERS

2.1. Pathophysiology

2.1.1. Congenital disorders

2.1.2 . Acquired disorders

2.1.3 . Effects of aging

2.2. Diseases of the Myocardium, Acquired

2.2.1. Cardiac failure

2.2.1.1. High output

2.2.1.2. Low output

2.2.1.3. Cor pulmonale

2.2.2. Cardiomyopathy

2.2.3. Ischemic heart disease

2.2.3.1. Angina

2.2.3.2. Myocardial infarction

2.2.3.3. Cardiogenic shock

2.2.3.4. Ventricular aneurysm

2.2.4. Endocarditis

2.2.5. Valvular heart disease

2.2.5.1. Aortic insufficiency/stenosis

2.2.5.2. Mitral insufficiency/stenosis

2.2.5.3. Pulmonary insufficiency/stenosis

2.2.5.4. Tricuspid insufficiency/stenosis

2.2.6. Myocarditis

2.3. Diseases of the Pericardium

2.3.1. Pericarditis (including Tuberculous Pericarditis)

2.3.2. Pericardial effusion/ tamponade

Emergency Medicine Core Content

2.4 Diseases of the Conduction System

2.4.1. Arrhythmias

- 2.4.1.1. Atrial flutter/fibrillation
- 2.4.1.2. Atrial/ junctional escape rhythms
- 2.4.1.3. Pre-excitation
- 2.4.1.4. Supraventricular tachycardia (AVNRT and AVRT)/ bradycardia
- 2.4.1.5. Ventricular fibrillation
- 2.4.1.6. Ventricular tachycardia
- 2.4.1.7. Ventricular escape rhythm

2.4.2. Conduction blocks

- 2.4.2.1. Sino-atrial block
- 2.4.2.2. Sick sinus syndrome
- 2.4.2.3. Atrioventricular blocks (1^o, 2^o, 3^o)
- 2.4.2.4. Bundle branch blocks

2.5. Diseases of the Circulation, Acquired

2.5.1. Arterial

- 2.5.1.1. Atherosclerosis/insufficiency
- 2.5.1.2. Aneurysm
- 2.5.1.3. Arteritis
- 2.5.1.4. Emboli
- 2.5.1.5. Spasm
- 2.5.1.6. Thrombosis

2.5.2. Venous

- 2.5.2.1. Venous insufficiency/varicosities
- 2.5.2.2. Thrombo-embolism
- 2.5.2.3. Thrombophlebitis

2.5.3. Lymphatics

2.6. Congenital Abnormalities of the Cardiovascular System

2.6.1. Familial/Genetically transmitted disorders

2.6.2. Disorders due to anatomical anomalies

- 2.6.2.1. Hypertrophic heart disease
- 2.6.2.2. Mitral valve prolapse
- 2.6.2.3. Patent foramen ovale

2.6.3. Pre-excitation syndromes

2.7. Cardiac Transplantation, Vascular Reconstruction, Circulatory Augmentation

Emergency Medicine Core Content

2.7.1. Indication for cardiovascular surgery

2.7.2. Indications of mechanical assistance

2.7.3. Indications for and complications of cardiac transplantation/artificial hearts

2.8. Hypertension

2.8.1 . Hypertensive emergency

2.8.2. Chronic hypertension

2.8.2.1. Essential

2.8.2.2. Secondary

2.9 Myocardial Manifestations of Systemic Diseases

2.9.1. Infections

2.9.1.1. Early (endocarditis 2° sepsis)

2.9.1.2. Late (rheumatic fever 2° group A streptococcal infection)

2.9.2. Endocrine and metabolic diseases

2.9.3. Rheumatologic

2.9.4 . Renal

2.9.5. Toxic exposures

2.10. Treatment Modalities

2.10.1. Thrombolytic therapy

2.10.2. Pharmacological agents

2.10.3. Permanent cardiac pacemakers

2.10.4. Implantable defibrillators

Emergency Medicine Core Content

3.0. DERMATOLOGICAL DISORDERS

3.1. Dermatitis/Eczema

- 3.1.1. Atopic
- 3.1.2. Contact
- 3.1.3. Dyshidrosis
- 3.1.4. Exfoliative

3.2. Infections

- 3.2.1. Bacterial
 - 3.2.1.1. Abscesses
 - 3.2.1.2. Cellulitis
 - 3.2.1.3. Erysipelas
 - 3.2.1.4. Folliculitis
 - 3.2.1.5. Impetigo
- 3.2.2. Fungal
 - 3.2.2.1. Candida
 - 3.2.2.2. Tinea
- 3.2.3 . Parasitic
 - 3.2.3.1. Pediculosis
 - 3.2.3.2. Scabies
- 3.2.4 . Viral
 - 3.2.4.1. Aphthous ulcers
 - 3.2.4.2. Herpes simplex
 - 3.2.4.3. Herpes zoster
 - 3.2.4.4. Molluscum contagiosum
 - 3.2.4.5. Warts

3.3. Maculopapular Lesions

- 3.3.1. Pityriasis
- 3.3.2. Purpura and petechiae
- 3.3.3. Urticaria

3.4. Papular/Nodular Lesions

Emergency Medicine Core Content

3.4.1. Epidermal inclusion cysts

3.4.2. Fibroma

3.4.3. Haemangioma

3.4.4. Lipoma

3.4.5 . Nevi

3.5. Erythemas

3.5.1. Erythema multiforme

3.5.2 . Erythema nodosum

3.6. Vesicular/ Bullous Lesions

3.6.1. Pemphigus

3.6.2. Scalded skin syndrome

3.6.3. Toxic epidermal necrolysis

3.7. Cancers

3.7.1. Basal cell

3.7.2. Kaposi's sarcoma

3.7.3 . Melanoma

3.7.4. Squamous cell

3.8. Cutaneous Manifestations of Allergic Reactions

3.9. Cutaneous Manifestations of Systemic Disease

Emergency Medicine Core Content

4. ENDOCRINE, METABOLIC, AND NUTRITIONAL DISORDERS

4.1. Acid-Base Disturbances

4.1.1. Metabolic

4.1.1.1. Acidosis

4.1.1.2. Alkalosis

4.1.2. Mixed acid-base disorders

4.1.3. Respiratory

4.1.3.1. Acidosis

4.1.3.2. Alkalosis

4.2. Adrenal Disease

4.2.1. Hyperadrenalism (Cushing's syndrome)

4.2.2. Hypo-adrenalism (Addison's disease)

4.3. Fluid and Electrolyte Disturbances

4.3.1. Calcium

4.3.2. Chloride

4.3.3. Magnesium

4.3.4. Potassium

4.3.5. Sodium

4.3.6. Water

4.3.7. Syndrome of inappropriate antidiuretic hormone

4.4. Glucose Metabolism

4.4.1. Diabetes mellitus

4.4.1.1. Diabetic ketoacidosis

4.4.1.2. Hyperosmolar coma

4.4.1.3. Complications

4.4.2. Hypoglycaemic syndromes

Emergency Medicine Core Content

4.5. Malnutrition

4.5.1. Wernicke/ Korsakoff syndrome

4.5.2 . Vitamin deficiency

4.6. Parathyroid Disease

4.7. Pheochromocytoma

4.8. Pituitary Disorders

4.8.1. Panhypopituitarism

4.8.2. Growth hormone abnormalities

4.9. Thyroid Disorders

4.9.1. Hyperthyroidism/ thyroid storm

4.9.2 . Hypothyroidism/ myxoedema

4.9.3 . Thyroiditis

Emergency Medicine Core Content

5. ENVIRONMENTAL DISORDERS

5.1. Barotrauma, Low and High Pressure

5.2. Burns

5.2.1. Chemical

5.2.2. Thermal

5.3. Drowning

5.4. Electrical Injury, Lightning Injury

5.5. High-Altitude Illness

5.6. Radiation Injury

5.7. Poisonous Plants

5.8. Smoke Inhalation

5.9. Temperature-Related Illness

5.9.1. Heat cramps/exhaustion/stroke

5.9.2. Hypothermia/cold injury/frostbite

5.10. Bites and Stings

5.10.1. Insect stings/bites

5.10.2. Mammalian bites

5.10.3. Marine bites/stings

5.10.4. Reptile bites/stings

5.10.5. Spiders/scorpions/other arthropods

Emergency Medicine Core Content

6. HEAD AND NECK DISORDERS

6.1. Ear

- 6.1.1. Cellulitis/abscess of external ear
- 6.1.2 . Foreign body
- 6.1.3. Labyrinthitis
- 6.1.4. Mastoiditis
- 6.1.5. Meniere's disease
- 6.1.6 . Otitis externa
- 6.1.7. Otitis media
- 6.1.8. Serous otitis
- 6.1.9. Tympanic membrane perforation

6.2. Nose

- 6.2.1. Epistaxis
- 6.2.2 . Nasal foreign body
- 6.2.3. Nasal fractures
- 6.2.4. Sinusitis
- 6.2.5. Submucous haematoma

6.3. Oropharynx/ Throat/ Trachea

- 6.3.1. Foreign body
- 6.3.2 . Gingivitis
- 6.3.3. Acute laryngitis
- 6.3.4. Bacterial tracheitis
- 6.3.5. Epiglottitis

Emergency Medicine Core Content

- 6.3.4 . Ludwig's angina
- 6.3.5 . Oral candidiasis
- 6.3.7 . Periodontal abscess
- 6.3.9 . Pharyngitis
- 6.2.10. Retropharyngeal abscess
- 6.3.11. Sialadenitis
- 6.3.12. Sialolithiasis
- 6.3.13. Stomatitis
- 6.3.14. Temporomandibular joint disorders
- 6.3.15. Tonsillitis/ peritonsillar abscess
- 6.3.16. Uvulitis

6.4. Eye

6.4.1. External eye

- 6.4.1.1. Blepharitis
- 6.4.1.2. Conjunctivitis
- 6.4.1.3. Corneal abrasions
- 6.4.1.4. Acid/Alkali burn
- 6.4.1.5. Dacryocystitis/ dacryoadenitis
- 6.4.1.6. Foreign body
- 6.4.1.7. Meibomian cyst/ abscess

6.4.2. Anterior pole

- 6.4.2.1. Cataract
- 6.4.2.2. Glaucoma
- 6.4.2.3. Hyphaema
- 6.4.2.4. Iritis
- 6.4.2.5 Keratitis

Emergency Medicine Core Content

- 6.4.3. Posterior pole
 - 6.4.3.1. Chroiditis
 - 6.4.3.2. Optic neuritis
 - 6.4.3.3. Papiloedema
 - 6.4.3.4. Retinal detachment
 - 6.4.3.5. Vascular occlusion
 - 6.4.3.5.1. Central retinal artery
 - 6.4.3.5.2. Central retinal vein
 - 6.4.3.6. Vitreous haemorrhage
- 6.4.4. Orbit
 - 6.4.4.1. Panophthalmitis
 - 6.4.4.2. Peri-orbital/orbital cellulites

6.5. Cavernous Sinus Thrombosis

Emergency Medicine Core Content

7. HAEMATOLOGICAL DISORDERS

7.1. Haemoglobinopathies

- 7.1.1. Sickle cell disease/trait
- 7.1.2. Thalassaemia

7.2. Haemostatic Disorders

- 7.2.1. Clotting factor disorders
 - 7.2.1.1. Haemophilias
 - 7.2.1.2. Acquired
- 7.2.2. Disseminated intravascular coagulation
- 7.2.3. Platelet disorders
 - 7.2.3.1. Immune thrombocytopenic purpura
 - 7.2.3.2. Thrombotic thrombocytopenic purpura
 - 7.2.3.3. Drug inactivation of platelets
- 7.2.4. Von Willebrand's disease

7.3. Transfusions

- 7.3.1. Autotransfusion
- 7.3.2. Complications
 - 7.3.2.1. Febrile
 - 7.3.2.2. Haemolytic
 - 7.3.2.3. IgA-mediated
 - 7.3.2.4. Disease transmission risk
 - 7.3.2.4.1. AIDS
 - 7.3.2.4.2. Hepatitis
 - 7.3.2.5. Massive transfusions
- 7.3.3. Component therapy
- 7.3.4. Synthetic blood replacement

Emergency Medicine Core Content

8. IMMUNE SYSTEM DISORDERS

8.1. Autoimmune Diseases

8.1.1 . Acute rheumatic fever

8.1.2. Nephritis

8.1.3 . Thyroiditis

8.1.4 . Vasculitis

8.2. Immune Deficiency Syndromes

8.6.1. HIV infection

8.7. Transplant Rejection

8.8. Hypersensitivity

8.8.1. Anaphylaxis (allergic and non-allergic)

8.8.2 . Angioneurotic oedema

8.8.3 . Hay fever/allergic rhinitis

8.8.4. Drug allergies

8.8.5. Serum sickness

Emergency Medicine Core Content

9. SYSTEMIC INFECTIOUS DISORDERS

9.1. Bacterial

- 9.1.1. Botulism
- 9.1.2 . Gonococcaemia
- 9.1.3 . Gram-negative sepsis
- 9.1.4 . Gram-positive sepsis
- 9.1.5 . Tuberculosis
- 9.1.6 . Meningococemia
- 9.1.7 . Plague
- 9.1.8 . Tetanus
- 9.1.9 . Toxic shock syndrome
- 9.1.10. Syphilis

9.2. Fungal

9.3. Protozoa - Parasites

- 9.3.1. Malaria
- 9.3.2 . Toxoplasmosis
- 9.3.3 . Trypanosomiasis

9.4. Rickettsiae

- 9.4.1. Tick bite fever

9.5. Viral

- 9.5.1. AIDS
- 9.5.2 . Infectious mononucleosis
- 9.5.3 . Influenza

Emergency Medicine Core Content

- 9.5.4 . Mumps
- 9.5.5 . Polio
- 9.5.6 . Rabies
- 9.5.7 . Rubella
- 9.5.8 . Rubeola
- 9.5.9 . Varicella

Emergency Medicine Core Content

10. MUSCULOSKELETAL DISORDERS (NON-TRAUMATIC)

10.1. Bony Abnormalities

10.1.1. Osteomyelitis

10.1.2. Tumours

10.1.3. Bone cysts

10.1.4. Osteoporosis

10.1.5. Osteomalacia

10.1.6. Bone spurs

10.1.7. Paget's disease

10.2. Joint Abnormalities

10.2.1. Collagen vascular arthritis

10.2.1.1. Septic arthritis

10.2.1.2. Gout/ pseudogout

10.2.2. Osteochondritis dessicans

10.3. Disorders of the Spine

10.3.1. Disc disorders

10.3.1.1. Derrniated nucleus pulposa

10.3.2.2. Discitis

10.3.4. Low back syndromes

10.3.4.1. Acute sprain

10.3.4.2. Sacroilitis

10.3.4.3. Sciatica

10.3.4.4. Tumours

10.4 . Overuse Syndromes

10.4.1. Tendonitis

10.4.2. Bursitis

10.4.3. Fibrositis

Emergency Medicine Core Content

10.4.4. Muscle strains

10.4.5. Carpal tunnel syndrome

10.5. Muscle Abnormalities

10.5.1. Muscular dystrophy

10.5.2. Rhabdomyolysis

10.5.3. Myositis

10.5.4. Myositis ossificans

10.6. Soft Tissue Infections

10.6.1. Necrotizing fasciitis

10.6.2. Gas gangrene

10.6.3. Cellulitis

10.6.4. Paronychia/ subungual abscess

10.6.5. Tenosynovitis

10.6.6. Lymphangitis

10.6.7. Abscesses

Emergency Medicine Core Content

11. NERVOUS SYSTEM DISORDERS

11.1. Cerebrovascular Disorders

11.1.1. Aneurysm

11.1.2. Arteriovenous malformation

11.1.3. Stroke syndrome

11.1.3.1. Hemorrhagic

11.1.3.2. Ischemic

11.1.3.2.1. Embolic

11.1.3.2.2. Thrombotic

11.1.3.3. Vertebrobasilar insufficiency

11.1.3.4. Transient ischemic attack

11.1.4. Subarachnoid haemorrhage

11.2. Cranial Nerve Disorders

11.2.1. Bell's palsy

11.2.2. Trigeminal neuralgia

11.3. Infections/Inflammatory Disorders

11.3.1. Abscess

11.3.2. Encephalitis

11.3.3. Meningitis

11.3.4. Myelitis

11.3.5. Neuritis

11.4. Neuromuscular Disorder

11.4.1. Landry-Guillain-Barr syndrome

11.4.2. Myasthenia gravis

11.5. Peripheral Neuropathy

Emergency Medicine Core Content

- 11.6. Spinal Cord Compression**
- 11.7. Central Nervous System Shunt Malfunction**
- 11.8. Seizure Disorders**
- 11.9. Headache**
- 11.10. Pseudotumour Cerebri**
- 11.11. Normal Pressure Hydrocephalus**

Emergency Medicine Core Content

12. OBSTETRICS.

12.1. Contraception

12.2. Pregnancy, Uncomplicated

12.3 . Pregnancy, Complicated

12.3.1. Ectopic

12.3.2. Hyperemesis gravidarum

12.3.3. Abortion

12.3.3.1. Threatened

12.3.3.2. Inevitable

12.3.3.3. Incomplete

12.3.3.4. Complete

12.3.3.5. Septic

12.3.3.6. Missed

12.3.4. Abruption placenta

12.3.5. Placenta previa

12.3.6. Toxaemia

12.3.7. Pre-eclampsia

12.3.8. Eclampsia

12.3.9. RH incompatibility

12.3.10. Hydatidiform mole

12.4. Labour, Uncomplicated

12.5. Labour, Complicated

12.5.1. Premature rupture of membranes

12.5.2. Premature labour

12.5.3. Failure to progress

12.5.4. Foetal distress

Emergency Medicine Core Content

12.5.5. Ruptured uterus

12.6. Delivery, Uncomplicated

12.6.1. Presentation

12.6.2. Position

12.6.3. Lie

12.6.4. Episiotomy

12.7. Delivery, Complicated

12.7.1. Presentation

12.7.2. Dystocia

12.7.3. Prolapsed cord

12.7.4. Retained placenta

12.7.5. Uterine inversion

12.7.6. Multiple births

12.7.7. Stillbirth

12.8. Postpartum Complications

12.8.1. Retained placenta

12.8.2. Endometritis

12.8.3. Mastitis

Emergency Medicine Core Content

13. PAEDIATRIC DISORDERS

13.1. Abdominal, Gastrointestinal

13.1.1. Aganglionic megacolon (Hirschsprung's disease)

13.1.2. Anorectal fissures

13.1.3. Appendicitis

13.1.4. Congenital lesions

13.1.4.1. Tracheo-oesophageal fistula

13.1.4.2. Oesophageal atresia

13.1.4.3. Chalasia

13.1.5 Foreign bodies

13.1.6. Gastroenteritis

13.1.6.1. Viral

13.1.6.2. Bacterial

13.1.7. Gastro-oesophageal reflux

13.1.8. Henoch-Schonlein purpura

13.1.9. Hernias

13.1.9.1. Inguinal

13.1.9.2. Umbilical

13.1.10. Inflammatory bowel disease

13.1.11. Intussusception

13.1.12. Malrotation of the bowel with volvulus

13.1.13. Meckel's diverticulum

13.1.14. Pseudomembranous enterocolitis

13.1.15. Pyloric stenosis

13.1.16. Tumours

13.1.16.1. Neuroblastoma

13.1.16.2. Wilm's tumour

13.2. Cardiovascular

Emergency Medicine Core Content

13.2.1. Dysrhythmias

13.2.2. Congenital heart disease

13.3. Endocrine

13.3.1. Diabetic ketoacidosis

13.3.2. Hypoglycaemia

13.4. Haematological

13.4.1. Glucose-6-phosphate dehydrogenase

13.4.2. Haemolytic uraemic syndrome

13.4.3. Neonatal jaundice

13.4.4. Acute leukaemia

13.4.5. Anaemia

13.5. Neurology

13.5.1. Meningitis

13.5.1.1. Aseptic
13.5.1.2. Bacterial

13.5.2. Seizures

13.5.2.1. Febrile
13.5.2.2. Nonfebrile
13.5.2.3. Neonatal

13.5.3. Shunt infection

13.5.4. Hydrocephalus

13.5.5. Guillain-Barré

Emergency Medicine Core Content

13.6. Orthopaedic

- 13.6.1. Septic joint
- 13.6.2. Osteomyelitis
- 13.6.3. Slipped capital femoral epiphysis
- 13.6.4. Transient synovitis
- 13.6.5. Tumours
 - 13.6.6.1 Ewing's sarcoma
 - 13.6.6.2 Osteogenic sarcoma
- 13.6.6. Osgood-Schatler disease

13.7. Head and Neck

- 13.7.1. Epiglottitis
- 13.7.2. Foreign bodies
- 13.7.3. Laryngo-tracheo-bronchitis (croup)
- 13.7.4. Nasopharyngitis (upper respiratory infection)
- 13.7.5. Otitis externa
- 13.7.6. Otitis media
- 13.7.7. Pharyngitis
- 13.7.8. Tonsillitis
- 13.7.9. Sinusitis
- 13.7.10. Stomatitis
- 13.7.11. Torticollis
- 13.7.12. Tracheitis, bacterial

Emergency Medicine Core Content

13.8. Psychiatric

13.8.1. Abuse

- 13.8.1.1. Alcohol
- 13.8.1.2. Drug
- 13.8.1.3. Neglect
- 13.8.1.4. Physical
- 13.8.1.5. Sexual

13.8.2. Eating disorders

13.8.3. Suicide

13.8.4. Acute psychosis

13.9. Respiratory

13.9.1. Bronchiolitis

13.9.2. Bronchopulmonary dysplasia

13.9.3. Cystic fibrosis

13.9.4. Foreign bodies

13.9.5. Asthma

13.9.6. Pneumonia

13.10. Skin and Soft Tissue

13.10.1. Bacterial

- 13.10.1.1. Cellulitis
 - 13.10.1.1.1. Orbital
 - 13.10.1.1.2. Peri-orbital

13.10.1.2. Impetigo

13.10.1.3. Staphylococcal scalded skin syndrome

13.10.2. Infestations

- 13.10.2.1. Louse
- 13.10.2.2. Scabies

Emergency Medicine Core Content

13.10.3. Fungal

- 13.10.3.1. Candida
- 13.10.3.2. Tinea/kerion

13.10.4. Viral Exanthema

- 13.10.4.1. Erythema infectiosum
- 13.10.4.2. Measles
- 13.10.4.3. Roseola
- 13.10.4.4. Rubella
- 13.10.4.5. Varicella zoster

13.11. Urologic

13.11.1. Penile

- 13.11.1.1. Balanitis
- 13.11.1.2. Paraphimosis
- 13.11.1.3. Priapism

13.11.2. Testicular

- 13.11.2.1. Hydrocoele
- 13.11.2.2. Torsion
- 13.11.2.3. Undescended testis

13.11.3. Urinary tract infections

13.12. Sudden Infant Death Syndrome

Emergency Medicine Core Content

14. PSYCHO BEHAVIOURAL DISORDERS

14.1. Thought Disorders

14.1.1. Schizophrenia

14.1.2. Delusional paranoia

14.2. Mood Disorders

14.2.1. Bipolar disorder

14.2.2. Depression

14.3. Anxiety Disorders

14.3.1. Post-traumatic stress

14.3.2. Panic

14.3.3. Phobia

14.3.4. Obsessive-compulsive

14.3.5. Catatonic

14.4. Somatoform Disorders

14.4.1. Hysterical conversion

14.4.2. Hypochondriasis

14.5. Factitious Disorders

14.5.1. Munchausen's syndrome

14.5.2. Drug-seeking behaviour

14.6. Addictive Behaviour

Emergency Medicine Core Content

14.7. Personality Disorders

- 14.7.1. Antisocial
- 14.7.2. Histrionic
- 14.7.3. Obsessive/compulsive
- 14.7.4. Passive/aggressive
- 14.7.5. Borderline personality

14.8. Organic Syndrome and Disorders

- 14.8.1. Delirium
- 14.8.2. Dementia (Alzheimer's disease and Multi-infarct)
- 14.8.3. Amnesia
 - 14.8.3.1. Traumatic
 - 14.8.3.2. Transient global
- 14.8.4. Intoxication and withdrawal
 - 14.8.4.1. Alcohol
 - 14.8.4.2. Sympathomimetics and cocaine
 - 14.8.4.3. Hallucinogens
 - 14.8.4.4. Phencyclidine
 - 14.8.4.5. Opioids
 - 14.8.4.6. Sedatives/hypnotics/anxiolytics

14.9. Suicide risk Assessment

14.10. Involuntary commitment

14.11. Treatment Modalities

- 14.11.1. Major tranquilizers
- 14.11.2. Sedatives/hypnotics
- 14.11.3. Physical restraints
- 14.11.4. Management of violence

Emergency Medicine Core Content

15. RENAL DISORDERS

15.1. Structural Disorders

- 15.1.1. Renal calculi
- 15.1.2. Urinary tract obstruction
- 15.1.3. Renal obstruction

15.2. Infection

- 15.2.1. Renal
 - 15.2.1.1. Pyelonephritis
 - 15.2.1.2. Perirenal abscess
- 15.2.2. Bladder Infection
- 15.2.3. Urethra
 - 15.2.3.1. Urethritis
 - 15.2.3.2. Acute urethral syndrome

15.3. Glomerular Disorders

- 15.3.1. Glomerulonephritis
- 15.3.2. Nephrotic syndrome

15.4. Acute and Chronic Renal Failure

15.5. Complications of Dialysis

Emergency Medicine Core Content

16. THORACIC-RESPIRATORY DISORDERS

16.1. Acute Upper Airway Obstruction

16.2. Breast Disorders

16.2.1. Fibrocystic disease

16.2.2. Tumour

16.2.3. Mastitis

16.2.4. Abscess

16.3. Disorders of Pleura, Mediastinum, and Chest Wall

16.3.1. Costochondritis

16.3.2. Mediastinal masses

16.3.3. Mediastinitis

16.3.4. Pleural effusions/empyema

16.3.5. Pleurisy

16.3.6. Pneumomediastinum

16.3.7. Pneumothorax

16.3.7.1. Spontaneous

16.3.7.2. Iatrogenic

16.3.7.3. Tension

16.4. Hyperventilation Syndrome

16.5. Noncardiogenic Pulmonary Oedema (Adult Respiratory Distress Syndrome)

16.6. Obstructive/Restrictive Lung Disease

16.6.1. Asthma

16.6.2. Bronchitis

16.6.3. Chronic obstructive pulmonary disease

Emergency Medicine Core Content

16.6.4. Cystic fibrosis

16.7. Physical and Chemical Irritants/Insults

16.7.1. Chemical agents

16.7.2. Foreign bodies

16.7.3. Aspiration of gastric contents

16.8. Pulmonary Embolism/Infarct

16.8.1. Venous thrombo-embolism

16.8.2. Fat embolism

16.8.3. Septic embolism

16.8.4. Amniotic fluid embolism

16.9. Pulmonary Infections

16.9.1. Bacterial

16.9.2. Fungal

16.9.3. Mycoplasma

16.9.4. Lung abscess

16.9.5. Bronchiectasis

16.9.6. Pneumocystis carinii

16.9.7. Septic emboli

16.9.8. Tuberculosis

16.9.9. Viral

16.10. Thoracic Outlet Syndrome

Emergency Medicine Core Content

17. TOXICOLOGY AND CLINICAL PHARMACOLOGY

17.1. Principles

- 17.1.1. Effect of age
- 17.1.2. Drug interactions/adverse reactions
- 17.1.3. Drugs and pregnancy/breastfeeding
- 17.1.4. Pharmacokinetics
- 17.1.5. Sources of toxicological information
- 17.1.6. Toxicology laboratory use
- 17.1.7. Withdrawal syndromes

17.2. Drug and Chemical Classes

- 17.2.1. Paracetamol
- 17.2.2. Alcohols
 - 17.2.2.1. Ethanol
 - 17.2.2.2. Ethylene glycol
 - 17.2.2.3. Isopropyl alcohol
 - 17.2.2.4. Methanol
- 17.2.3. Analgesics/ anaesthetics
 - 17.2.3.1. Fentanyl
 - 17.2.3.2. Ketamine
 - 17.2.3.3. Nitrous oxide
 - 17.2.3.4. Propofol
- 17.2.4. Antibiotics
- 17.2.5. Anticoagulants
- 17.2.6. Anticonvulsants
- 17.2.7. Antidepressants
 - 17.2.7.1. Lithium
 - 17.2.7.2. Monoamine oxidase inhibitors
 - 17.2.7.3. Cyclic antidepressants

Emergency Medicine Core Content

- 17.2.8. Antiparkinson drugs
- 17.2.9. Antihistamines
- 17.2.10. Antipsychotics
- 17.2.11. Autonomic drugs
 - 17.2.11.1. Alpha agonists/alpha blockers
 - 17.2.11.2. Beta agonist/beta blockers
 - 17.2.11.3. Bronchodilators
 - 17.2.11.4. Cholinergic agonists/anticholinergics
- 17.2.12. Camphor
- 17.2.13. Cannabis
- 17.2.14. Carbon monoxide
- 17.2.15. Cardiovascular drugs
 - 17.2.15.1. Antiarrhythmics
 - 17.2.15.2. Antihypertensives
 - 17.2.15.3. Digitalis preparations
 - 17.2.15.4. Calcium channel blockers
- 17.2.16. Caustic agents
- 17.2.17. Cyanides, hydrogen sulphide
- 17.2.18. Cocaine
- 17.2.19. Hallucinogens
- 17.2.20. Hazardous material spills
- 17.2.21. Heavy metals and chelation
- 17.2.22. Household/industrial poisons
- 17.2.23. Hormones/steroids
- 17.2.24. Hydrocarbons/halogenated hydrocarbons
- 17.2.25. Hypoglycaemics/ insulin
- 17.2.26. Inhaled toxins

Emergency Medicine Core Content

- 17.2.27. Iron
- 17.2.28. Local anaesthetics
- 17.2.29. Locally acting drugs
 - 17.2.29.1. Antacids
 - 17.2.29.2. Antiseptics
 - 17.2.29.3. Cathartics
 - 17.2.29.4. Laxatives
- 17.2.30. Mace, tear gas
- 17.2.31. Marine toxins
- 17.2.32. Methemoglobinaemia
- 17.2.33. Monosodium glutamate
- 17.2.35. Mushrooms
- 17.2.36. Neuromuscular blocking agents
- 17.2.37. Nitrogen compounds
- 17.2.38. Nonsteroidal anti-inflammatories
- 17.2.39. Organophosphates/carbamate
- 17.2.40. Opiates/opioids
- 17.2.41. Salicylates
- 17.2.42. Sedatives/hypnotics
 - 17.2.42.1. Barbiturates
 - 17.2.42.2. Benzodiazepines
- 17.2.43. Stimulants
 - 17.2.43.1. Amphetamines
 - 17.2.43.2. Caffeine
- 17.2.44. Strychnine
- 17.2.45. Tocolytics, oxytocics

Emergency Medicine Core Content

17.3. Treatment Modality

17.3.1. Antidotes

17.3.2. Gastric decontamination

17.3.3. Enhanced elimination

Emergency Medicine Core Content

18. TRAUMATIC DISORDERS

18.1. Principles of Care

- 18.1.1. Prehospital trauma care
- 18.1.2. Triage
- 18.1.3. Resuscitation and stabilization
- 18.1.4. Role of the emergency physician
- 18.1.5. Team response
- 18.1.6. Reassessment and monitoring
- 18.1.7. Diagnosis
- 18.1.8. Treatment
- 18.1.9. Consultation
- 18.1.10. Disposition
- 18.1.11. Injury prevention

18.2. Radiological Evaluation

- 18.2.1. Plain radiographs
- 18.2.2. Contrast radiography
- 18.2.3. Computed tomography scan
- 18.2.4. Angiography
- 18.2.5. Magnetic resonance imaging
- 18.2.6. Ultrasonography (including FAST)

18.3. Mechanism of Injury

- 18.3.1. Blunt trauma
- 18.3.2. Gunshot wounds/shotgun wounds

Emergency Medicine Core Content

- 18.3.2.1. Ballistics
- 18.3.2.2. Forensic concerns

18.3.1. Kinematics

18.3.4. Stab wounds

18.4. Diagnosis and Management by Anatomic Areas

18.4.1. Head trauma

- 18.4.1.1. Scalp laceration/avulsion
- 18.4.1.2. Skull fractures
- 18.4.1.3. Brain concussion, contusion
- 18.4.1.4. Intracranial haematomas
- 18.4.1.5. Brainstem injuries
- 18.4.1.6. Penetrating head trauma
- 18.4.1.7. Cerebrospinal fluid leak (otorrhoea, rhinorrhoea)

18.4.2. Spinal cord and peripheral nervous system trauma

- 18.4.2.1. Complete spinal cord injuries
- 18.4.2.2. Incomplete cord injuries
- 18.4.2.3. Cauda equina injuries
- 18.4.2.4. Nerve root injuries
- 18.4.2.5. Brachial and lumbosacral plexus injuries
- 18.4.2.6. Peripheral nerve injury

18.4.3. Injuries of the spine

- 18.4.3.1. Fractures
 - 18.4.3.1.1. Compression fracture
 - 18.4.3.1.2. Vertebral body fracture
 - 18.4.3.1.3. Posterior element fracture
 - 18.4.3.1.4. Spinous process fracture
 - 18.4.3.1.5. Ring fracture, 1st cervical vertebra (Jefferson fracture)
 - 18.4.3.1.6. Odontoid fracture
 - 18.4.3.1.7. Pedicle fracture of 2nd cervical vertebra (Hangman's fracture)
 - 18.4.3.1.8. Lumbar fracture associated with seat belts (Chance fracture)
 - 18.4.3.1.9. Sacral fracture

Emergency Medicine Core Content

18.4.3.2. Dislocations/subluxations

- 18.4.3.2.1. Unilateral facet dislocation
- 18.4.3.2.2. Bilateral facet dislocation
- 18.4.3.2.3. Spondylolisthesis
- 18.4.3.2.4. Ligamentous injuries
- 18.4.3.2.5. Herniated discs

18.4.4. Facial trauma

18.4.4.1. Fractures

- 18.4.4.1.1. Frontal sinus
- 18.4.4.1.2. Mandibular
- 18.4.4.1.3. Maxillary
- 18.4.4.1.4. Nasal
- 18.4.4.1.5. Orbital
- 18.4.4.1.6. Teeth
- 18.4.4.1.7. Zygoma

18.4.4.2. Dislocation

- 18.4.4.2.1. Mandibular

18.4.5. Soft tissue injuries

- 18.4.5.1. Complex lacerations
- 18.4.5.2. Avulsions
- 18.4.5.3. Severe abrasions
- 18.4.5.4. Neurovascular injuries
- 18.4.5.5. Cranial nerve injuries
- 18.4.5.6. Parotid gland/duct injuries

18.4.6. Ophthalmologic trauma

- 18.4.6.1. Corneal abrasion/laceration
- 18.4.6.2. Foreign body
- 18.4.6.3. Traumatic iritis
- 18.4.6.4. Hyphaema
- 18.4.6.5. Lens dislocation
- 18.4.6.6. Retinal detachment
- 18.4.6.7. Traumatic cataract
- 18.4.6.8. Penetrating globe injuries
- 18.4.6.9. Eyelid lacerations
- 18.4.6.10. Lacrimal duct injuries

Emergency Medicine Core Content

18.4.7. Otologic trauma

- 18.4.7.1. Lacerations
- 18.4.7.2. Avulsions
- 18.4.7.3. Foreign body
- 18.4.7.4. Perforated tympanic membrane
- 18.4.7.5. Temporal bone fractures
- 18.4.7.6. Subchondral haematoma

18.4.8. Anterior neck trauma

- 18.4.8.1. Vascular injuries
 - 18.4.8.1.1. Carotid artery
 - 18.4.8.1.2. Internal and external jugular
 - 18.4.8.1.3. Thoracic duct
- 18.4.8.2. Laryngotracheal
 - 18.4.8.2.1. Lacerations
 - 18.4.8.2.2. Crush injuries
 - 18.4.8.2.3. Vocal cord avulsions/haematomas
 - 18.4.8.2.4. Fractured larynx
 - 18.4.8.2.5. Tracheal transection
 - 18.4.8.2.6. Compression with haematomas
 - 18.4.8.2.7. Foreign body aspiration
- 18.4.8.3. Pharyngo-oesophageal
 - 18.4.8.3.1. Perforation
 - 18.4.8.3.2. Foreign body ingestion

18.4.9. Penetrating neck trauma

- 18.4.9.1. Anterior and posterior triangle injuries
- 18.4.9.2. Anatomic zones (I, II, III) and injuries specific to them
- 18.4.9.3. Mandatory versus selective exploration

18.4.10. Chest trauma

- 18.4.10.1. Soft tissue contusion
- 18.4.10.2. Rib fractures
- 18.4.10.3. Sternal fractures
- 18.4.10.4. Flail chest
- 18.4.10.5. Clavicle fracture/dislocation
- 18.4.10.6. Aortic rupture
- 18.4.10.7. Myocardial contusion
- 18.4.10.8. Pulmonary contusion
- 18.4.10.9. Pericardial tamponade
- 18.4.10.10. Vascular injuries
- 18.4.10.11. Air embolization
- 18.4.10.12. Pneumothorax

Emergency Medicine Core Content

- 18.4.10.13. Haemothorax
- 18.4.10.14. Pneumatocoele
- 18.4.10.15. Avulsion of main stem bronchus
- 18.4.10.16. Penetrating chest trauma

- 18.4.11. Abdominal trauma
 - 18.4.11.1. Abdominal wall contusion
 - 18.4.11.2. Rectus muscle haematoma
 - 18.4.11.3. Solid viscus injury
 - 18.4.11.4. Hollow viscus injury (duodenal contusion/transection, perforated large and small intestine)
 - 18.4.11.5. Vascular injury
 - 18.4.11.6. Diaphragmatic rupture
 - 18.4.11.7. Evisceration
 - 18.4.11.8. Mesenteric avulsion, haematoma
 - 18.4.11.9. Bladder rupture, contusion
 - 18.4.11.10. Renal injuries
 - 18.4.11.10.1. Contusions
 - 18.4.11.10.2. Lacerations
 - 18.4.11.10.3. Renal vascular injuries

 - 18.4.11.11. Ureteric injuries
 - 18.4.11.12. Penetrating abdominal trauma

- 18.4.12. Upper extremity injuries
 - 18.4.12.1. Fractures (open and closed)
 - 18.4.12.1.1. Phalangeal fractures
 - 18.4.12.1.2. Metacarpal fractures
 - 18.4.12.1.3. Carpal bone fractures
 - 18.4.12.1.4. Forearm fractures
 - 18.4.12.1.5. Supracondylar fractures of the humerus
 - 18.4.12.1.6. Humeral shaft and head fractures
 - 18.4.12.1.7. Scapula fracture

 - 18.4.12.2. Dislocations/subluxations
 - 18.4.12.2.1. Shoulder
 - 18.4.12.2.1.1. Acromioclavicular separation
 - 18.4.12.2.1.2. Anterior
 - 18.4.12.2.1.3. Inferior (luxatio erecta)
 - 18.4.12.2.1.4. Posterior

Emergency Medicine Core Content

- 18.4.12.2.2. Elbow
 - 18.4.12.2.2.1. Nursemaid's elbow
 - 18.4.12.2.2.2. Posterior dislocations
 - 18.4.12.2.2.3. Radial head
- 18.4.12.2.3. Wrist
 - 18.4.12.2.3.1. Lunate dislocation
 - 18.4.12.2.3.2. Perilunate dislocation
 - 18.4.12.2.3.3. Ligamentous injuries of carpal bones
- 18.4.12.2.4. Hand
 - 18.4.12.2.4.1. At metacarpophalangeal joint
 - 18.4.12.2.4.2. At interphalangeal joints
- 18.4.13. Lower extremity injuries
 - 18.4.13.1. Fractures (open and closed)
 - 18.4.13.1.1. Phalangeal fractures
 - 18.4.13.1.2. Fractured metatarsals
 - 18.4.13.1.3. Tarsal bone fracture
 - 18.4.13.1.3.1. Calcaneal fracture
 - 18.4.13.1.3.2. Talus fracture
 - 18.4.13.1.4. Ankle fractures
 - 18.4.13.1.4.1. Distal tibia and fibular fractures
 - 18.4.13.1.4.2. Bimalleolar and trimalleolar fractures
 - 18.4.13.1.5. Leg fractures (tibia - fibula)
 - 18.4.13.1.5.1. Tibial plateau fractures
 - 18.4.13.1.5.2. Tibial shaft fractures
 - 18.4.13.1.5.3. Fibular head fractures
 - 18.4.13.1.6. Patellar fractures
 - 18.4.13.1.7. Midshaft and distal femur fractures
 - 18.4.13.1.8. Proximal femur fractures (hip fracture)
 - 18.4.13.1.8.1. Subcapital
 - 18.4.13.1.8.2. Femoral neck fracture
 - 18.4.13.1.8.3. Intertrochanteric fracture
 - 18.4.13.1.8.4. Subtrochanteric fracture
 - 18.4.13.2. Dislocations
 - 18.4.13.2.1. Phalangeal dislocations
 - 18.4.13.2.2. Lisfranc (midfoot) fracture dislocation
 - 18.4.13.2.3. Ankle dislocation
 - 18.4.13.2.4. Knee dislocation
 - 18.4.13.2.5. Patellar dislocation

Emergency Medicine Core Content

- 18.4.13.2.6. Hip dislocation
- 18.4.14. Epiphyseal injuries
- 18.4.15. Pelvic fractures (open and closed)
 - 18.4.15.1. Pubic rami
 - 18.4.15.2. Straddle fracture (bilateral superior and inferior pubic rami fractures)
 - 18.4.15.3. Iliac crest
 - 18.4.15.4. Malgaigne (vertical shear) fractures
- 18.4.16. Compartment syndromes
- 18.4.17. Amputations/reimplantation
- 18.4.18. Tendon injuries
 - 18.4.18.1. Partial lacerations
 - 18.4.18.2. Complete transections
 - 18.4.18.3. Tendon rupture
- 18.4.19. Periarticular injuries
 - 18.4.19.1. First-, second-, and third-degree sprains
 - 18.4.19.2. Injuries to bursa
 - 18.4.19.3. Ligamentous lacerations
 - 18.4.19.4. Bursitis
 - 18.4.19.5. Septic bursitis secondary to trauma
- 18.4.20. Injuries to joints
 - 18.4.20.1. Penetrating injuries
 - 18.4.20.2. Rupture of joint capsule
- 18.4.21. Other soft tissue injuries
 - 18.4.21.1. Muscle strains
 - 18.4.21.2. Penetrating soft-tissue injuries
 - 18.4.21.3. Crush injuries and crush syndrome
 - 18.4.21.4. High-pressure injection injuries

Emergency Medicine Core Content

- 18.4.22. Cutaneous injuries
 - 18.4.22.1. Principles of wound management
 - 18.4.22.2. Lacerations
 - 18.4.22.3. Avulsions
 - 18.4.22.4. Burns
 - 18.4.22.4.1. Thermal
 - 18.4.22.4.2. Electrical
 - 18.4.22.4.3. Chemical

- 18.4.23. Injuries of the genitalia
 - 18.4.23.1. Female
 - 18.4.23.1.1. Labial contusion/haematoma
 - 18.4.23.1.2. Vaginal laceration

 - 18.4.23.2. Male
 - 18.4.23.2.1. Penis
 - 18.4.23.2.1.1. Fracture
 - 18.4.23.2.1.2. Avulsion
 - 18.4.23.2.1.3. Amputation
 - 18.4.23.2.1.4. Penetrating injury
 - 18.4.23.2.1.5. Urethral injuries

 - 18.4.23.2.2. Scrotal injury
 - 18.4.23.2.3. Testicular injury

18.5. Trauma in Pregnancy

- 18.5.1. Principles of care

- 18.5.2. Clinical assessment and management
 - 18.5.2.1. Physiologic alterations in the pregnant woman
 - 18.5.2.2. Foetal monitoring
 - 18.5.2.3. Emergency department caesarean section

- 18.5.3. Types of injuries
 - 18.5.3.1. Uterine rupture
 - 18.5.3.2. Placental abruption
 - 18.5.3.3. Premature labour
 - 18.5.3.4. In-utero injuries to the foetus
 - 18.5.3.5. Penetrating injury to the uterus

18.6. Special Considerations for Paediatric Trauma Victim

Emergency Medicine Core Content

19. URO-GENITAL/ GYNAECOLOGIC DISORDERS

19.1. Genital Tract/Female

19.1.1. Ovarian disorders

- 19.1.1.1. Ovarian cyst
- 19.1.1.2. Ovarian torsion
- 19.1.1.3. Tumours

19.1.2. Vagina and vulva

- 19.1.2.1. Vaginitis
- 19.1.2.2. Foreign bodies
- 19.1.2.3. Imperforate hymen

19.1.3. Uterus

- 19.1.3.1. Endometriosis
- 19.1.3.2. Dysfunctional uterine bleeding
- 19.1.3.3. Tumours
- 19.1.3.4. Uterine prolapse

19.1.4. Cervix

- 19.1.4.1. Carcinoma
- 19.1.4.2. Cysts
- 19.1.4.3. Leukoplakia

19.1.5. Infectious disorders

- 19.1.5.1. Bartholin abscess
- 19.1.5.2. Cervicitis
- 19.1.5.3. Endometritis
- 19.1.5.4. Fitz-Hugh-Curtis Syndrome
- 19.1.5.5. Pelvic inflammatory disease
- 19.1.5.6. Salpingitis
- 19.1.5.7. Tubo-ovarian abscess
- 19.1.5.8. Vulvovaginitis

19.2. Genital Tract/Male

19.2.1. Congenital

- 19.2.1.1. Hydrocoele
- 19.2.1.2. Hypospadias
- 19.2.1.3. Phimosis
- 19.2.1.4. Varicocele

19.2.2. Structural

- 19.2.2.1. Paraphimosis

Emergency Medicine Core Content

- 19.2.2.2. Peyrone's disease
- 19.2.2.3. Priapism
- 19.2.2.4. Testicular torsion
- 19.2.2.5. Urethral phlegmon
- 19.2.2.6. Urethral strictures
- 19.2.2.7. Urethral foreign bodies

19.2.3. Inflammation/infection

- 19.2.3.1. Epididymitis
- 19.2.3.2. Balanitis
- 19.2.3.3. Gangrene of the scrotum (Fournier's gangrene)
- 19.2.3.4. Orchitis
- 19.2.3.5. Prostatitis
- 19.2.3.6. Urethritis

19.2.4. Tumours

19.3. Sexual Assault

19.4. Genital Lesions

Emergency Medicine Core Content

20. ADMINISTRATIVE ASPECTS OF EMERGENCY MEDICINE

20.1. Departmental Administration

- 20.1.1. Billing/reimbursement
- 20.1.2. Budgeting
- 20.1.3. Cost containment principles
- 20.1.4. Equipment and supplies
- 20.1.5. Facility design
- 20.1.6. Forms
- 20.1.7. Health care financing
- 20.1.8. Marketing
- 20.1.9. Medical records/documentation
- 20.1.10. Personnel management
- 20.1.11. Public relations
- 20.1.12. Quality assurance/control

20.2. Ethics

- 20.2.1. Professional relationships
 - 20.2.1.1. Peer review
 - 20.2.1.2. Impairment
 - 20.2.1.3. Incompetence
 - 20.2.1.4. Teaching
 - 20.2.1.4.1. Responsibilities
 - 20.2.1.4.2. Limitations
 - 20.2.1.5. Witness as an expert
 - 20.5.1.5.1. Defendant
 - 20.5.1.5.2. Plaintiff

20.3. Medical-Legal Aspects

- 20.3.1. Consent
 - 20.3.1.1. Expressed, implied
 - 20.3.1.2. Informed
 - 20.3.1.3. Uninformed
 - 20.3.1.3.1. Incompetent patients
 - 20.3.1.3.2 . Minors

Emergency Medicine Core Content

20.3.2. Laws

- 20.3.2.1. Certification of psychiatric patients.
- 20.3.2.2. Drug-related
 - 20.3.2.2.1. Controlled substances
 - 20.3.2.2.2. Drug abuse
 - 20.3.2.2.3. Medicines control council regulations
- 20.3.2.3. Good Samaritan laws
- 20.3.2.4. Patient transfer agreements
- 20.3.2.5. Regulations regarding reportable conditions
 - 20.3.2.5.1. Abuse
 - 20.3.2.5.2. Assault
 - 20.3.2.5.3. Communicable disease
 - 20.3.2.5.4. Deaths
 - 20.3.2.5.5. Transfusion restrictions
 - 20.3.2.5.6. Organ donation/ Transplantation
- 20.3.2.6. Liability
 - 20.3.2.6.1. Duty to treat
 - 20.3.2.6.2. Insurance
 - 20.3.2.6.3. Malpractice
 - 20.3.2.6.4. Negligence
 - 20.3.2.6.5. Patient-related
 - 20.3.2.6.5.1. Privileged communications
 - 20.3.2.6.5.2. Research
 - 20.3.2.6.5.3. Termination of patient care
 - 20.3.2.6.5.4. Consent and capacity
 - 20.3.2.6.6. Resuscitation decisions
 - 20.3.2.6.7. Risk management
 - 20.3.2.6.8. Testimony

20.3. Discharge Planning

20.4. Medical Staff

- 20.4.1. Credentials.
- 20.4.2. Minimum training requirements/qualifications
- 20.4.3. Disciplinary policy
- 20.4.4. Structure

20.5. Medical Organizations

Emergency Medicine Core Content

- 20.5.1. College of Medicine of South Africa incorporating the College of Emergency Medicine.
- 20.5.2. Trauma Society of South Africa
- 20.5.3. Emergency Medicine Society of South Africa
- 20.5.4. Society for Academic Emergency Medicine (USA)
- 20.5.5. South African Medical Association
- 20.5.6. Resuscitation council of South Africa
- 20.5.7. Resuscitation council of the United Kingdom
- 20.5.8. Burns Society of South Africa
- 20.5.9. Child Accident Prevention Foundation of South Africa
- 20.5.10. Medical Research Council of South Africa
- 20.5.11. HPCSA

20.6 Inter-personal skills

- 20.6.1. Persuasion and influence
- 20.6.2. Management
- 20.6.3. Negotiations
- 20.6.4. Effective patient/physician communications
- 20.6.5. Hostile encounters/complaints
- 20.6.6. Grief reactions (Elisabeth Kübler-Ross)

Emergency Medicine Core Content

20.7. Doctor wellness

20.7.1. Sickness

20.7.2. Stress management

20.7.3. Work schedules

20.7.4. Physician impairment

Emergency Medicine Core Content

21. EMERGENCY MEDICAL SERVICES

21.1. System Organization

21.1.1. System components

- 21.1.1.1. Emergency medical services field personnel
- 21.1.1.2. Emergency department personnel
- 21.1.1.3. Transport services
- 21.1.1.4. Lead agency and local organizations

21.1.2. Categorization and designation of levels of services

21.1.3. Identify specialized care centres

21.2. System Operations

21.2.1. Communications system

- 21.2.1.1. Radio configuration
- 21.2.1.2. Dispatch
- 21.2.1.3. Communications protocols

21.2.2. Patient care protocols

- 21.2.2.1. Scene triage and treatment protocols
- 21.2.2.2. Hospital triage and treatment protocols

21.2.3. Transport vehicles

- 21.2.3.1. Ground
- 21.2.3.2. Air
- 21.2.3.3. Water access

21.2.4. Medical control

- 21.2.4.1. Medical director
- 21.2.4.2. Offline and online supervision
- 21.2.4.3. System audit and quality assurance
- 21.2.4.4. Maintenance of skills of personnel

21.2.5. Governmental controls

- 21.2.5.1. Development and implementation of regulations
- 21.2.5.2. Funding
- 21.2.5.3. Certification/recertification

Emergency Medicine Core Content

21.2.6. EMS administration

- 21.2.6.1. Provision of on-line system monitoring and maintenance of system integrity
- 21.2.6.2. Serving as a training resource
- 21.2.6.3. Evaluation of allocation of resources
- 21.2.6.4. Stress/burnout of EMS personnel

21.2.7. System overload

21.3. Education

21.3.1. CPR, first aid, and EMS awareness training

- 21.3.1.1. First responders
- 21.3.1.2. General public

21.3.2. Ambulance personnel training

- 21.3.2.1. Basic
- 21.3.2.2. Intermediate
- 21.3.2.3. Paramedic

21.3.3. Recertification

21.3.4. Injury prevention

21.3.5. Assessment of environmental, biologic, and toxicological hazards

21.3.6. EMS research

21.4. Disaster Medicine

21.4.1. Definition of disaster

- 21.4.1.1. Determining magnitude of a disaster
- 21.4.1.2. Epidemiology of disasters
- 21.4.1.3. Philosophy of disaster management
- 21.4.1.4. Types of disaster
 - 21.4.1.4.1. Explosions and fires
 - 21.4.1.4.2. Mass crowd gathering events
 - 21.4.1.4.3. Medical response to terrorist incidents
 - 21.4.1.4.4. Natural
 - 21.4.1.4.5. Transportation disasters

Emergency Medicine Core Content

21.4.2. Phases of disaster response

21.4.2.1. Preparation

- 21.4.2.1.1. Planning
- 21.4.2.1.2. Equipment
- 21.4.2.1.3. Training

21.4.2.2. Response

- 21.4.2.2.1. Command
- 21.4.2.2.2. Safety
- 21.4.2.2.3. Communication
- 21.4.2.2.4. Assessment
- 21.4.2.2.5. Triage
- 21.4.2.2.6. Treatment
- 21.4.2.2.7. Transport

21.4.2.7. Debriefing

21.4.3. Disaster medical care

21.4.3.1. Rapid assessment of emergency health care needs

21.4.3.2. Evaluation and management of mass casualties

21.4.3.3. Disaster injuries

21.4.3.3.1. Mental health and behavioural consequences

- 21.4.3.3.1.1. For disaster victims
- 21.4.3.3.1.2. For professionals
- 21.4.3.3.1.3. Critical incident stress debriefing

21.4.3.3.2. Shock and its treatment in field situations

- 21.4.3.3.3. Trauma casualties
- 21.4.3.3.4. Crush syndrome/injury
- 21.4.3.3.5. Compartment syndrome
- 21.4.3.3.6. Mass burn care
- 21.4.3.3.7. Pulmonary casualties
- 21.4.3.3.8. Paediatric casualties
- 21.4.3.3.9. Neuropsychiatric casualties
- 21.4.3.3.10. Toxic-chemical casualties
- 21.4.3.3.11. Radiation exposure casualties
- 21.4.3.3.12. Blast injuries

21.4.3.4. Medical supply/equipment management

- 21.4.3.4.1. Essential drugs for disasters
- 21.4.3.4.2. Pharmaceutical distribution/control
- 21.4.3.4.3. Role of vaccines

Emergency Medicine Core Content

21.4.4. Information services

- 21.4.4.1. Local/national/international disaster information
- 21.4.4.2. Public relations
- 21.4.4.3. Media coordination
- 21.4.4.4. Legal aspects

21.4.5. Education, training, and research

- 21.4.5.1. Disaster drills
- 21.4.5.2. Teaching materials and dissemination
- 21.4.5.3. Training for prevention

21.4.6. Administration of disaster medical assistance team

21.4.7. Management of international relief assistance

- 21.4.7.1. Coordination
- 21.4.7.2. Volunteers

21.5. EMS Research

21.5.1. Assessment of new methods and procedures

21.5.2. Testing of new equipment and technologic advances

21.5.3. Regional data collection

Emergency Medicine Core Content

22. PROCEDURE SKILLS (competence in skills marked with * is desired, but not essential. Candidates should have theoretical knowledge of all skills listed though)

22.1. Airway Techniques

22.1.1. Basic airway opening (head tilt, chin lift, jaw thrust)

22.1.2. Cricothyrotomy- needle and surgical.

22.1.3. Heimlich manoeuvre

22.1.4. Intubation

23.1.3.1. Oesophageal obturator airway (combitube) *

23.1.3.2. Oropharyngeal and nasopharyngeal airways.

23.1.3.3. Nasotracheal

23.1.3.4. Orotracheal

23.1.3.5. Use of paralytic agents

22.1.5. Mechanical ventilation

22.1.6. Percutaneous transtracheal ventilation *

22.2. Anaesthesia

22.2.1. Local

22.2.2. Regional IV anaesthesia

22.2.3. Regional nerve blocks

22.2.4. Monitored anaesthetic care/ procedural sedation

22.3. Diagnostic Procedures

22.3.1. Arthrocentesis

22.3.2. Culdocentesis *

22.3.3. Lumbar puncture

22.3.4. Pericardiocentesis *

22.3.5. Peritoneal lavage *

22.3.6. Proctoscopy *

Emergency Medicine Core Content

22.3.7. Thoracocentesis

22.3.8. Tonometry *

22.4 . Genital/urinary

22.4.1. Bladder catheterization

22.4.1.1. Foley catheters

22.4.1.2. Suprapubic catheterization

22.4.2. Delivery of newborn

22.4.2.1. Breech delivery

22.4.2.2. Normal delivery

22.4.2.3. Perimortem caesarean section *

22.5. Head and Neck

22.5.1. Control of epistaxis

22.5.1.1. Anterior packing

22.5.1.2. Posterior packing/balloon placement

22.5.1.3. Cautery

22.5.2. Laryngoscopy

22.6. Haemodynamic Techniques

22.6.1. Arterial catheter insertion

22.6.2. Central venous access

22.6.2.1. Femoral

22.6.2.2. Jugular- internal and external

22.6.2.3. Subclavian

22.6.2.4. Umbilical

22.6.2.5. Venous cutdown

22.6.2.6. Intraosseus infusion

Emergency Medicine Core Content

22.7. Skeletal Procedures

22.7.1. Fracture/dislocation immobilization techniques

22.7.2. Fracture/dislocation reduction techniques

22.7.3. Spine

23.7.3.1. Trauma/spinal board techniques

23.7.3.2. Cervical traction techniques

23.7.3.3. Immobilization techniques

22.8. Thoracic

22.8.1. Cardiac pacing- transcutaneous

22.8.2. Defibrillation/cardioversion

22.8.3. Electrocardiography

22.8.4. Pericardiotomy *

22.8.5. Tube thoracostomy (chest drain insertion)

22.8.6. Thoracotomy *

22.9. Other Techniques

22.9.1. End-tidal CO₂ monitoring

22.9.2. Gastric lavage

22.9.3. Incision - drainage

22.9.4. Naso-gastric tube insertion

22.9.5. Pulse oximetry

22.9.6. Sengstaken-Blakemore tube insertion *

22.9.7. Suture techniques

22.9.8. Wound management/ bandaging techniques

22.9.9. Foreign body removal

Emergency Medicine Core Content

22.10. Laboratory Skills

22.10.1. Vena puncture

22.10.2. Arterial blood gas sampling

22.10.3. Urine microscopy

22.11. Multiple Patient Management