

Impaired myocardial oxygen supply

- Coronary artery disease:
 - atherosclerosis
 - arteritis in connective tissue disorders
 - diabetes mellitus
- Coronary artery spasm
- Congenital coronary artery disease:
 - arteriovenous fistula
 - anomalous origin from pulmonary artery
- Severe anaemia or hypoxia

Increased myocardial oxygen demand

- Left ventricular hypertrophy:
 - hypertension
 - aortic valve disease
 - hypertrophic cardiomyopathy
- Tachyarrhythmias

Box 13.4**Causes of coronary artery disease**

- Atherosclerosis
- Arteritis
 - systemic lupus erythematosus
 - polyarteritis nodosa
 - rheumatoid arthritis
 - ankylosing spondylitis
 - syphilis
 - Takayasu's disease
- Coronary dissection
 - spontaneous
 - catheter or angioplasty induced
- Embolism
 - infective endocarditis
 - left atrial/ventricular thrombus
 - left atrial/ventricular tumour
 - prosthetic valve thrombus
 - paradoxical embolism
 - complication of cardiac catheterization
- Coronary mural thickening
 - amyloidosis
 - radiation therapy
 - Hurler's disease
 - pseudoxanthoma elasticum
- Other causes of coronary luminal narrowing
 - aortic dissection
 - coronary spasm
- Congenital coronary artery disease
 - anomalous origin from pulmonary artery
 - arteriovenous fistula

Table 13.1 Causes of heart failure

Ventricular pathophysiology

Clinical examples

Restricted filling

Mitral stenosis
Constrictive pericarditis
Restrictive cardiomyopathy
Hypertrophic cardiomyopathy

Pressure loading

Hypertension
Aortic stenosis
Coarctation of the aorta

Volume loading

Mitral regurgitation
Aortic regurgitation

Contractile impairment

Coronary artery disease
Dilated cardiomyopathy
Myocarditis

Arrhythmia

Severe bradycardia
Severe tachycardia

Table 13.2 NYHA classification

NYHA class	Description
I	Asymptomatic
II	Symptoms on normal exertion, e.g. walking up a flight of stairs
III	Symptoms on minimal exertion, e.g. getting dressed
IV	Symptoms at rest

Box 13.12**Causes of elevated jugular venous pressure**

- Congestive heart failure
- Cor pulmonale
- Pulmonary embolism
- Right ventricular infarction
- Tricuspid valve disease
- Tamponade
- Constrictive pericarditis
- Hypertrophic/restrictive cardiomyopathy
- Superior vena cava obstruction
- Iatrogenic fluid overload, particularly in surgical and renal patients

Box 13.26**Jones's criteria for the diagnosis of rheumatic fever****Major criteria**

- Carditis
- Polyarthrititis
- Erythema marginatum
- Chorea
- Subcutaneous nodules

Minor criteria

- Fever
- Arthralgia
- Previous rheumatic fever
- Elevated erythrocyte sedimentation rate
- Prolonged PR interval

Box 14.3**Peripheral stigmata (signs) of chronic liver disease****Skin, nails and hands**

- Spider naevi – small telangiectatic superficial blood vessels with a central feeding vessel
- Clubbing of the hands
- Leuconychia – expansion of the paler half-moon at the base of the nail
- Palmar erythema – seen on the thenar and hypothenar eminence – often with blotchy appearance
- Bruising
- Dupuytren's contracture – can occur in the absence of liver disease
- Scratch marks – particularly in cholestatic liver disease

Endocrine – due to excess oestrogens

- Gynaecomastia
- Testicular atrophy
- Loss of axillary and pubic hair

Other

- Parotid swelling – particularly in alcohol-related liver disease
- Hepatic foetor – characteristic sweet-smelling breath
- Hepatic flap – a sign of encephalopathy and advanced disease

Box 14.4**Clinical features of marked abdominal swelling****Gross ascites**

- Dull in flanks
- Umbilicus everted and/or hernia present
- Shifting dullness positive
- Fluid thrill positive

Large ovarian cyst

- Resonant in flank
- Umbilicus vertical and drawn up
- Large swelling felt arising out of pelvis which one cannot 'get below'

Intestinal obstruction

- Resonant throughout
- Colicky pain
- Vomiting
- Recent cessation of passage of stool and flatus
- Increased and/or 'tinkling' bowel sounds

Table 16.2 Headaches: points to consider in the history

Aspect of history	Feature	Diagnosis
Region/location	Focal, retro-orbital	Cluster headache
		Migraine
		Retro-orbital lesion
	Focal, frontal	Sinus pathology
		Chiari malformation/cerebellar tonsillar ectopia
	Occipital	Intracranial hypotension
		Cervical spondylosis
		Occipital neuralgia
	Unilateral	Migraine
		Chronic paroxysmal hemicrania (CPH)
Hemicrania continua		
Generalized	Migraine	
	Tension-type headache	
	Chronic daily headache (chronic migraine; tension-type headache)	
Temporal aspects	>50% of days	Migraine
	Attacks of hours/days	Cluster headache
	Attacks of up to 1 hour	CPH
	Many attacks, lasting minutes	Trigeminal neuralgia
	Attacks of seconds	Raised intracranial pressure
	Worse on waking	Sleep apnoea
		Meningitis
		Abscess
	New, acute/subacute onset	Encephalitis
		Subarachnoid haemorrhage (SAH)
Tension-type headache		
Character and severity	Explosive onset, severe	Migraine
	Tight band around head, bland, featureless, not very severe	Cluster headache
	Throbbing, moderately severe	Trigeminal neuralgia
	Extremely severe, constant	Migraine
	Severe, stabbing, lancinating	Cluster headache
Provoking/relieving factors	Provoked by alcohol	Migraine
	Occur at night, start in sleep	Cluster headache
		Migraine
		Cluster headache
	Relieved by sleep	Hypnic headache
		Migraine
	Triggered by touching or moving the face	Trigeminal neuralgia
	Caused by cough	Chiari malformation
Idiopathic cough headache		
Exertion	Exacerbates migraine	
	Benign exertional headache	
Orgasm	Benign coital headache (SAH has to be excluded in a severe single attack)	

Box 17.1**Causes of haematuria****Systemic**

- Purpura
- Sickle cell trait
- Bleeding disorders, including anticoagulant drugs

Renal

- Infarct/papillary necrosis
- Trauma
- Tuberculosis
- Stones
- Renal pelvis transitional cell carcinoma, and other renal tumours:
 - Wilms' tumour (in children)
- Acute glomerulonephritis

Postrenal

- Ureteric stones
- Ureteric neoplasms
- Bladder tumours (transitional cell carcinoma)
- Bladder tuberculosis and bilharziasis
- Radiation cystitis
- Drug-induced cystitis, e.g. cyclophosphamide
- Prostatic enlargement
- Urethral neoplasms
- Bacterial cystitis

Box 18.1**Clinical features of hyperthyroidism**

- Tachycardia
- Atrial fibrillation/heart failure
- Eye signs
- Lid lag
- Lid retraction
- Exophthalmos (Graves' disease)
- Sweating
- Thyroid gland enlargement and bruit (Graves' disease)
- Fine distal tremor
- Thinning of hair
- Proximal weakness; cannot rise from squat
- Chorea

Box 18.2**Endocrine and metabolic diseases in which weight loss is a clinical feature**

- Hyperthyroidism
- Type 1 diabetes mellitus
- Hypopituitarism
- Adrenocortical failure (Addison's disease)
- Anorexia nervosa

Box 18.3**Conditions in which increased body weight is a feature**

- Simple obesity: energy intake/expenditure imbalance
- Primary hypothyroidism
- Cushing's syndrome
- Hypothalamic lesions
- Leptin deficiency

Box 18.4**Conditions in which metabolic myopathy is a feature****Painless**

- Hyperthyroidism
- Cushing's syndrome, including iatrogenic steroid myopathy
- Acromegaly

Painful

- Vitamin D deficiency
- Osteomalacia
- Hypothyroidism

Muscle weakness

Box 21.2**Causes of deafness****Conductive**

- Occluding wax in the external meatus
- Middle ear effusion
- Acute suppurative otitis media
- Chronic otitis media: perforation, ossicular erosion, cholesteatoma
- Otosclerosis
- Trauma to the drum or ossicular chain
- Otitis externa
- Congenital atresia of the external meatus or congenital ossicular fixation
- Carcinoma of the middle ear

Sensorineural

- Age-associated hearing loss: presbycusis
- Noise-induced hearing loss
- Genetic: syndromal or non-syndromal
- Ménière's disease
- Infective: meningitis, measles, mumps, syphilis
- Sudden sensorineural hearing loss (idiopathic)
- Perinatal: hypoxia, jaundice
- Prenatal: rubella
- Trauma: head injury, surgery
- Ototoxicity: aminoglycosides, diuretics, cytotoxics
- Neoplastic: vestibular schwannoma, other cerebellopontine angle lesions

Box 21.3**Causes of vertigo****Of sudden onset**

- Acute viral labyrinthitis
- Vestibular neuritis

With focal features

- Brainstem ischaemia (transient ischaemic attack)
- Multiple sclerosis
- Migraine
- Temporal lobe epilepsy

With deafness and tinnitus

- Ménière's disease
- Vestibular schwannoma

With positional change

- Benign paroxysmal positional vertigo (BPPV)
- Cervical vertigo

After trauma

- BPPV
- Perilymph fistula

With motion

- Motion sickness

Drug induced

- Vestibulotoxic drugs, e.g. gentamicin, salicylate, quinine, antihypertensives

With aural discharge

- Middle ear disease

With systemic disorders

- Postural hypotension
- Syncope
- Cardiac dysrhythmia
- Carotid sinus hypersensitivity
- Anxiety and panic attacks
- Hyperventilation syndrome

Box 21.1**Causes of otalgia****Otological**

- Acute suppurative otitis media, mastoiditis
- Acute otitis externa
- Barotrauma
- Furunculosis
- Perichondritis
- Herpes zoster (Ramsay Hunt syndrome – shingles of the facial nerve)
- Myringitis bullosa – viral myringitis
- Necrotizing external otitis (malignant otitis externa)
- Neoplasia

Non-otological

- Tonsillitis or quinsy
- Dental disease
- Temporomandibular joint pathology
- Cervical spine disease
- Carcinoma in the upper air and food passages