Differential Diagnosis of Collapse

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Cause grouping	Differentials	Classical history	Classic examination findings	Investigation findings (Initial test, diagnostic test)	Definitive management (remember ABCDE first)
Neurological	Generalised seizure	•*Tonic-clonic (grand mal)*: sudden LOC, limbs stiff then jerk, may become incontinent, bite tongue, feel awful with myalgia and confusion afterwards •*Absence (petit mal):* unresponsively stare into space for ~ 5 seconds (in childhood) •*Atonic:* all muscles relax and drop to floor •*Tonic:* all muscles become rigid •*Myoclonic:* involuntary flexion	•May be post-ictal •Focal neurology may indicate cause	•EEG (if required) Find cause •CT head: rule out intracranial cause •Electrolytes •Capillary glucose •Drug levels	•Treat case •Anti-epileptics if ≥2 episodes •IV lorazepam or PR diazepam to terminate acute seizure
	Parkinson's disease	•QUADRAD = rigidity + tremor + bradykinesia + postural instability	•Resting tremor •Shuffling, festinating gait with lack of arm swing •Cogwheel rigidity •Bradykinesia	*Clinical diagnosis* •DaTSCAN may be used if uncertainty	•Levodopa •Dopamine agonists
	TIA/stroke	•Sudden-onset neurological symptoms e.g. limb/face weakness, slurred speech, hemianopia •Risk factors e.g. old, HTN, smoking, DM, vascular disease, AF	•Neurological defects e.g. hemiplegia, homonymous hemianopia, dysphasia, sensory loss	•CT head •ECG: check for AF •Coagulation screen •Carotid Doppler	•Acute: aspirin ± thrombolysis if ischaemic stroke •Long term: clopidogrel + statin + BP control •Carotid endarterectomy (if stenosis >70% or >50% + symptoms)
	Vasovagal	•Occurs in response to stimuli e.g. emotion/pain/fear/prolonged standing •Preceding nausea, pallor, sweat, closing visual fields •Then LOC for ~ 2 mins	•Normal	*Clinical diagnosis* •Tilt-table test if syncope diagnosis unclear •Consider investigation to exclude other causes •ECG: normal	•Reassurance •Avoid triggers
	Situational syncope (e.g. cough syncope, micturition syncope)	•Transient syncope in certain circumstance e.g. while coughing or during micturition/defecation	•Normal	*Clinical diagnosis* •Tilt-table test if syncope diagnosis unclear •Consider investigation to exclude other causes •ECG: normal	•Reassurance
	Other neuro differentials	Neuropathy (e.g. MS); intracranial haemorrhages (extradural, subarachnoid, subdural); raised intracranial pressure			
Cardio-vascular	Postural hypotension	•Dizziness ± LOC on standing from lying •Recently started/changed anti-hypertensive	•Postural BP drop of >20 systolic and >10 diastolic	Find cause •U&Es (dehydration) •Inflammatory markers (infection) •FBC (anaemia) •Synacthen test (Addisons) •Fasting glucose (diabetic autonomic dysfunction)	•Treat cause e.g. IV fluids, medication changes •Fludrocortisone may be tried if persists
	Aortic stenosis	•Collapse on exertion •Breathlessness worse on exertion	•Ejection systolic murmur •Slow rising pulse •Narrow pulse pressure •Heaving apex beat •May be signs of LVF	•Echocardiogram	•Surgical valve replacement (if symptomatic, severe, LVF or pulmonary HTN)
	Arrhythmia	•Fall after transient arrhythmia •May have palpitations or feel very strange before collapse •Cardiac history or family history of sudden death •May have occurred during exercise or when supine	•May be normal	•ECG: usually normal between attacks but may reveal underlying cause e.g. WPW, Brugada syndrome; long QT •Ambulatory ECG monitoring: try to catch an episode •Implantable loop recorder: if episodes less frequent •Echocardiogram: look for structural heart disease	•Depends on arrhythmia •β-blockers or anti-arrhythmics •ICD (if risk of VT/VF) •Pacemaker (if: persistent symptomatic bradycardia, trifascicular block, Mobitz type II/CHB or pauses >3s) •Cardiac ablation
	Other cardiac differentials	-Structural (e.g. HOCUM, ARVD) -Carotid sinus hypersensitivity (precipitated by head turning/shaving – diagnosed by carotid sinus massage → ≥3 second pause in heart beat) -Vertebrobasilar insufficiency (vertigo precipitated by head extension in elderly patients with cervical OA) -Subclavian steal syndrome (proximal subclavian artery stenosis causes the vertebral arteries to become involved in a collateral circuit to bypass the obstruction causing retrograde flow in one of the vertebral arteries)			
Other	Drug overdose/ toxicity	•History of drug use or taking drug with narrow therapeutic range •Drug use prior to collapse	•Depends on drug	Find cause •Therapeutic drug levels •Overdose drug levels (e.g. paracetamol, salicylate)	•Depends on drug
	Alcohol intoxication	•History of alcohol use	•Smells of alcohol	•Alcohol level (if required)	•Observation
	Mechanical fall	•Clear story of tripping •No syncope/LOC •No preceding symptoms	•Normal •Check for injuries	•Consider investigation to exclude other causes	•Reassurance •Treat any injuries
	Other differentials	Postural instability; polypharmacy; ectopic pregnancy; ruptured AAA; delirium; vertigo; anaemia; hypoglycaemia; hypercapnic acidosis; sepsis; eyesight problems; arthritis; leg weakness; anxiety; factitious blackouts; choking; heat syncope			

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