Falls in Frail Elderly Cribsheet Version 1.3 Copyright D O'Kane MD Students should also see Abcmedicalnotes.com

INTRODUCTION

- A fall is defined as an unintentional or unexpected loss of balance resulting in coming to rest on the floor, the ground, or an object below knee level
- Due to Gravity and bipedal though some fall out of bed. Commoner than we think. Only a percentage come to hospital because of trauma or couldn't get up or otherwise ill or carers/family concerned or social concerns.
- Paramedics help pick up many who then stay at home and may be referred into RACOP or to GP

IT IS AMAZING THAT WE CAN WALK IN FIRST PLACE

- Human's Bipedal stance and close neurological feedback loops
- We learn to walk takes 2-3 years. Walking is a full neuro work out
- Manage slopes, friction, ICE, irregular surface, mats, carpet, hazards
- Two things do we do such that better not to do than do badly (walk/swallow)

INCIDENCE

- 50% of those over 80 fall at least once each year. Costs are massive.
- Leading cause of accidental death those over aged 65
- 90,000 ED attendances UK/PA. Hip fractures alone cost 6 Billion PA in UK

WHY DO PEOPLE FALL

- Divide into recurring and one-off ill-advised episodes. Hx is all important,
- Need to get a thorough understanding what happened.
- Ambulance notes, ring family or neighbour. Examine. Therapists

GENERAL LIST OF CAUSES

- Ageing of vestibular system, proprioception and pathways, peripheral neuropathy, brain, reduced reaction time, sarcopenia, bradykinesia of PD, peripheral vascular disease, Visual problems, Foolishness, Alcohol, Gait
- Low BP often Postural: Autonomic neuropathy, excess diuretics or BP meds, meds for Prostate or Parkinson's disease, Addison's disease
- Bradycardia: Sinus node disease, Carotid sinus hypersensitivity, heart block, bradycardia inducing drugs, Cholinesterase inhibitors
- Poor environment: bad lighting, carpets, trip over pets and obstructions, lack of handrails in bath/shower/stairs, Polypharmacy: See below

DIZZY PATIENT: DEFINE IF IT IS ONE OF THESE

- **Instability**: Feels unsteady. Poor sensory feedback, Peripheral neuropathy, anxiety, ageing and weakness and frailty
- **Vertigo**: rooms spins with head movements when sitting or lying is usually intermittent and due to BPPV. Occasionally Stroke but then signs more fixed. Have you had vertigo ? Will tell you how…
- **Presyncope**: feels about to pass out. Look for Vasodepressor (low BP) or Cardioinhibitory (low HR) causes. Due to GTN or rapid standing, baths, micturition, alcohol and large meals. VVS when prolonged standing/situational. Consider OP 24 hr tape and possibly Tilt table.

HISTORY TO OBTAIN

- A narrative about the fall both before during and after
- History of falls, new medications, comorbidities, old meds
- Are they on anticoagulation or antiplatelet increase bleed risk
- House set up, safety, are there stairs, who is in the house
- Are there stair rails, is there clutter – is the house an obstacle course
- Walking aids, does she use, will she use, is there room for a frame
- Has she lost confidence, anxiety, does she want to be at home
- Has she a pendant alarm. Does she need a POC., Are family supportive

EXAMINATION

- How frail is she. Is she kyphosis and unstable, eyesight, any neurology, any pains? Check L/S BP if fall preceded by dizziness/presyncope
- Listen for murmurs. Is she pale with pigmentation like Addison's?
- See her walk. Can she get up and go? If safe walk pt . How risky is it

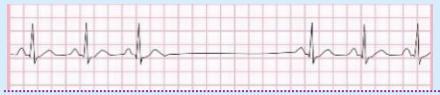
TRAUMA ASSESSMENT: CHALLENGES OF CONFUSED PT

- Usually completed by the Emergency department who will assess according to guidelines and will often do a CT head, CT Spine, CT Pelvis
- Do not trust their assessment but when you see patient go from head to toe looking for problems basically looking for bony tenderness and bruising.
- Palpate skull look at face, any neck pain, any arm pain, ask any rib pain. Spring the pelvis, ask them to straight leg raise. Not using an arm/leg.
- Recently found undiagnosed #NOF in a patient who had seen ED/Trauma and vascular surgeons. Blaming the hip pain on ischaemic leg.
- Trust no one. There may be skin tears and soft tissue injury that need plastics referral and may need dressing and skin grafts.
- A long lie (traditionally over 1 hr) may be associated with raised CK and dehydration, aspiration pneumonia and rhabdomyolysis. Recent CK 51,000

INVESTIGATIONS (90 YR OLD SYNCOPE VS 50 YR OLD DIFFERENT)

- FBC, U&E, CRP, TFT, B12 folate, CK may be elevated, Troponin if needed.
- CXR, ECG. 24 hr tape if suspected rhythm disturbance. Cortisol.SST
- Echo if suspect Critical aortic stenosis for intervention. I get few echoes in frail elderly. They all have systolic/diastolic failure and I treat failure symptomatically. Consider tilt table, 7-day tape, implantable loop recorder

ECG WITH A SINUS PAUSE: ALWAYS CHECK THE ECG



CHECKLIST MDE

- Medical: Check falls history, gait, balance and mobility, and muscle weakness, osteoporosis risk. Manage infections, electrolytes, delirium, continence. Assess vision, cognition, cardiac and neurology. Walk patient
- Drugs: see medications below plus commonest drug is alcohol
- Environment: Stairs, lighting, carpets, clutter, ADLs, functional ability and fear relating to falling, pets, hazards

MEDICATIONS TRY AND STOP SOME

- 💊Benzodiazepines/Hypnotics: slowed rection time, reduced proprioception, ataxia, altered balance
- 💊Antidepressants/Antipsychotics, TCA, SSRI, Antipsychotics: cause sedation, slowing and hypotension on standing:
- 💊Anticonvulsants: Cause sedation, dizziness and ataxia
- 💊Cardiac meds Digoxin (Brady) ACE/Nitrates/CCB/BB (low BP).
- 💊Levodopa formulations: hypostatic hypotension
- 💊Opioids: Sedation. 💊Alcohol: causes ataxia, impaired decision making
- 💊Insulin and other dugs causing hypoglycaemia
- 💊 Anticoagulants !!! Risk assess benefits vs risks

MANAGEMENT IS MULTIDISCIPLINARY AND PRAGMATIC

- There is not single plan it depends on what happened. Much of the plan is common sense and risk assessment. The only way to prevent falls is not to walk but for most that is unacceptable. For a few that is needed who then live bed to chair "microenvironment" "student life!". Downsizing!
- Stairs can be a real risk. Falls on flat bad, falls downstairs lethal. Live on ground floor. Downstairs commode. Stair rails. Stairs with help. Even coming down on bottom. Live in a house/flat you can die in – has easy access and living on one level. Else you will need a N/H. Equipment: Perching stool in kitchen or in shower, Walking stick, frame, hand rails on stairs. A Package of care to assist with transfers.
- Following a fall there is often severe loss of confidence and Fear of Falling Over [FOFO] and patients may be too scared to walk or go home. Needs good therapy and medical team work to try to build back confidence.
- Those with trauma need full ED assessment and may need referral to T&O and may need Analgesia. In injuries allow in principle get people up as soon as possible and if fractures then whenever Ortho feel they can weight bear.
- Cardioinhibitory syncope: Stop rate slowing drugs: βBlockers, Cholinesterase Inhibitors, Verapamil, Consider Pacemaker if persists
- Vasodepressor syncope: Midodrine, Fludrocortisone
- We rarely search for exotic causes e.g., Brugada or Cardiomyopathies
- Consider anticonvulsants if history suggests seizure and predisposition.

CASE #1 EXAMPLE

- 87 year old lady fell on way to toilet. Bruised arm and skin lacerations. Rushing as took diuretic for ankle swelling. Unsure of LOC. Couldn't get off floor was able to bang on the wall. Neighbours called 999. Police broke in. SBP 110 fell to 90 mmHg on standing.
- Solution: Stopped diuretic. No drop. Given rollator frame. Pendent alarm around her neck. OT home visit - rails x2 on stairs. May purchase stair lift.
- She lost confidence but with these actions feels more confident returning home. She will be assessed at home after discharge by therapy.

CASE #2 EXAMPLE

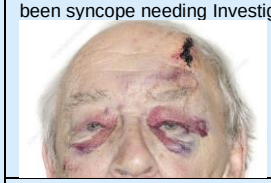
- 83 year old male who fell but has no memory and woke upon floor. # clavicle. Defensive so may have been conscious with fall.
- PMHx chronic alcohol intake. Amb crew mention lots of empty cans. Wife died 6 months ago. Rx Pabrinex and Chlordiazepoxide for first few days.
- CT scan: atrophy and small subdural. Manage conservatively. He spends 4 weeks in rehab and returns home. Continues alcohol intake.
- Therapists move bed downstairs. Downstairs toilet. Concerns with stairs. Keen for home. Accepts one call/day to help him wash/dress in am.

CASE #3 EXAMPLE

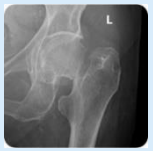
- JH is a 86 year old admitted with unexplained syncope with facial injury (no defence so possibly unconscious). He has a loud ESM to his neck.
- He has runs of 2nd degree heart block and several 4-5 cm pauses on a 24-hr tape. An echo shows critical aortic stenosis, and he has a TAVI and PPM inserted without complication. He goes home 3 weeks later.

ASSESING INJURIES

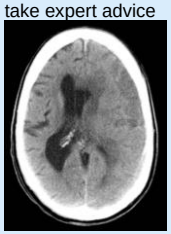
Facial Trauma May Suggest poor attempt at self-protection and have been syncope needing Investigations



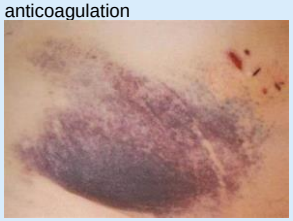
Leg is shortened and externally rotated, and patient will not do Straight leg raising

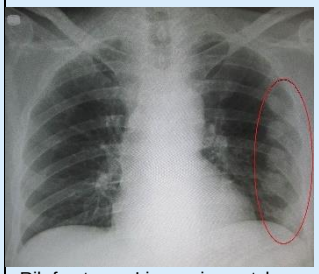


Large subdural. Others can be very small and have no symptoms. Acutely stop any anticoagulation and take expert advice

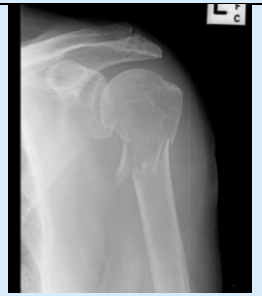


Extensive subcutaneous brusinig canbe associated with large drops in Hb and worsened by anticoagulation





Rib fractures: Lignocaine patches are a safe, effective adjunct for rib fracture pain



Humeral fracture done as outstretched hand trying to protect self