Collapse in the older patient

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Other causes of collapse

- AAA
- Pneumothorax
- Drug abuse
- Acute pancreatitis
- Anaphylaxis
- PTE
- DKA
- Fever/ sepsis
You need a Framework
Definitions

The basic assessment

Pitfalls in the older patient

Treatment strategies
Why is this so difficult?

50% not witnessed

30% amnesic

Lack of prodrome

Cognitive impairment

I felt a wee bit dizzy and then blacked out

I’ve had a funny do, just went down
Case 1 Mr R 84 years
27th Oct 2017

He said: *I had been to the toilet, and collapsed falling forward and bumped my head. Don’t think I blacked out*

She said: *I heard a crash and went downstairs to find him wedged in next to the radiator. He had two episodes last week when he was ‘dizzy’ and went pale. Not quite himself.*

PMH  Glaucoma, Alzheimers dementia, Epilepsy
DH  Timolol eye drops, lamotrogine, galantamine, laxatives
O/E  News 0, head injury with 12 cm laceration to head. HS normal. No postural drop

Investigation
- ECG- sinus bradycardia
- Bloods OK, CT scan head NAD
What Is the diagnosis?

1. Urinary tract infection
2. Fall with head injury
3. Vasovagal
4. Orthostatic hypotension
5. Arrhythmia
6. Not sure
Case 1 Mr R 84 years
28th Oct 2017

Telemetry overnight

Two alarms
6 and 12 second pause
Refer cardiology and
change eye drops
? Stop galantamine

4pm
Further episode on the ward
News 0
BUT 6 seconds pause on telemetry

Diagnosis- Collapse secondary to sinus pause secondary to timolol
and galantamine

PPM on 30th October
Definitions

Fall
An unexpected event in which the participant comes to rest on the ground, floor, or lower level

Drop attack
Sudden loss of postural tone where consciousness is maintained
Definitions

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Mechanical fall does not exist
Definitions

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Sudden loss of postural tone where consciousness is maintained.

TLoC
Syncope and its differential.

Syncope
T-LoC due to reversible transient global cerebral hypoperfusion characterised by rapid onset, short duration, and spontaneous complete recovery.
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T-LoC due to reversible transient global cerebral hypoperfusion characterised by rapid onset, short duration, and spontaneous complete recovery.

Funny do
I don’t know what’s going on

Collapse
If in doubt UTI
Urinary tract infection

Asymptomatic bacteruria
- Increases with age
- More adverse effects than benefit
- Don’t treat the dipstick

Urinary tract infection
- Dysuria, frequency of micturition, suprapubic tenderness, urgency, polyuria, haematuria

Is it really just a fall?

Table 1: Prevalence of Syncope and Falls in One Year from The Irish Longitudinal Ageing Study (TILDA) (Personal Communication)

<table>
<thead>
<tr>
<th>Previous Year</th>
<th>%</th>
<th>50–64 years</th>
<th>65–74 years</th>
<th>75+ years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syncope</td>
<td>4.17</td>
<td>4.74</td>
<td>4.84</td>
<td></td>
<td>4.42</td>
</tr>
<tr>
<td>Falls</td>
<td>17.46</td>
<td>19.46</td>
<td>24.43</td>
<td></td>
<td>19.19</td>
</tr>
<tr>
<td>Non-accidental/unexplained falls</td>
<td>7.61</td>
<td>9.41</td>
<td>11.58</td>
<td></td>
<td>8.87</td>
</tr>
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</table>

Syncope in the older patient is under recognised
Frailty - the new buzz word

The inability to withstand illness without loss of function

- Falls
- Functional Decline
- Immobility
- Delirium
- Cognitive decline
- Incontinence

And it predicts everything

Segmenting the population

35% Mild Frailty
15% Moderate Frailty
5% Severe Frailty

Risk of hospitalisation

20% 40% 70%

People registered with test GP practices aged 65 and over

<table>
<thead>
<tr>
<th>Primary care</th>
<th>Adjusted OR (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls</td>
<td>1.23 (0.99-1.54)</td>
</tr>
<tr>
<td>Disability</td>
<td>1.79 (1.47-2.17)</td>
</tr>
</tbody>
</table>
Classification

Cardiac arrhythmias
- sinus node dysfunction
- AV conduction disease
- Tachyarrythmia
- Device malfunction
- Inherited syndromes

Structural heart disease
- Valvular disease
Classification

Orthostatic syncope (autonomic nervous system)

- Medication
- Volume depletion
- Autonomic failure
  - Primary – idiopathic
  - Secondary
- Alcohol
- POTS

- Autoimmune autonomic neuropathy (ganglionic AchR Abs)
- Pure autonomic failure
- Multi-System Atrophy
- Lewy Body Dementia
- Diabetes (HbA1c)
- Amyloid (myeloma screen)
- Adrenal insufficiency (SST)
- Collagen/vascular diseases (autoimmune screen)
- Lambert Eaton Myasthenic Syndrome (anti-Ca channel Abs)
- HIV (HIV test)
- Syphilis (VDRL)
Classification

Reflex (neurally) mediated syncope
(vasodilatation and bradycardia)

- Vasovagal faint
- Carotid sinus syncope
- Situational syncope - cough, micturition, post exercise
30% of older patients have more than one possible cause.
Causes of syncope by age

- **<40**
  - Cardiac Structural Disease: 0%
  - Orthostatic Hypotension: 0%
  - Arrhythmia: 0%
  - Neurally Mediated Syncope: 0%

- **40-60**
  - Cardiac Structural Disease: 0%
  - Orthostatic Hypotension: 0%
  - Arrhythmia: 0%
  - Neurally Mediated Syncope: 0%

- **>60**
  - Cardiac Structural Disease: 0%
  - Orthostatic Hypotension: 0%
  - Arrhythmia: 0%
  - Neurally Mediated Syncope: 0%
And those incorrectly diagnosed as syncope

Loss of consciousness

- Epilepsy
- Vertebrobasilar Insufficiency
- Intoxication
- Metabolic disorders

Consciousness only apparently lost

- Drop attacks
- Psychogenic pseudosyncope

TIA in vertebrobasilar region
Focal signs - vertigo, dipolplia, nystagmus

Altered gait and balance
BP/CVS
Psychogenic
Menieries
Epilepsy
Initial evaluation

**History**
- Collateral history
- Drugs
- Driving

**Provokers**
- Posture

**Prodrome**
- What type of dizziness?
- Balance
- Gait

- Is it really just a fall?
- Have they lost consciousness?
- Is the TLoC attributable to syncope or not?
- Are there clinical features that suggest the diagnosis?
Initial evaluation

Heart sounds
Quick neuro
Eye movements/ nystagmus
Gait and Balance- Get up and Go
Postural BP
Hallpike
Find and Fire up the otoscope

Assess Injury

Cognition/ Delirium

Frailty

Bloods
ECG
BM
LOOK FOR A GAIT DISORDER

**Have they got a neurological cause?**
- Stroke
- Parkinsons
- Spastic paraparesis

**Have they got a dodgy joints?**
- OA, RA
- Gout, replacements
- Parkinsons
- Spastic paraparesis

**Do they have muscle weakness?**
- Frailty, steroids

**Have they got funny feet?**
- Ulcers, pressure sores, gout

**Are their nerves affected?**
- Diabetes, B12, folate
Look at your local pathway- falls service/ blackouts
OESIL risk score
Consecutive patients with syncope presenting to ER

Derivation cohort n=270
Validation cohort n=328

Risk factors
- Abnormal ECG
- Hx CVS disease
- Lack of prodrome
- Age > 65 years

Score vs 1 year mortality
0  0%  
1  0.6% 
2  14% 
3  29% 
4  53%
Syncope Pathway for Emergency Department & Secondary Care QEUH

Definite or possible total loss of consciousness (T-LOC)
Provisional Diagnosis and Risk Stratification

Suspected Seizure

Other Causes of collapse

First Step

Vasovagal Syncope (VVS)
- Diagnose if:
  - Features suggestive of Posture, Provoking fac Prodromal symptoms
  - No features to suggest plausible alternative cause e.g. transient myoclonic jerk, urinary incontinence, c feature of VVS
  - No high risk ECG abn

Discharge with Information to Primary Care
- Uncomplicated and Info VVS or OH.
- Uncomplicated and info: Situational syncope (e.g. cough, swallowing, or micturition syncope)

Initial conservative management has been attempted
- Syncope
  - Injury as a result of syncope
  - Occupational or driving implications
- Other factors may influence the need for admission e.g. frailty, co-morbidities

Length of Stay (Days)

- Pre Pathway
- Post Pathway
- 1yr Post Pathway

IQR = Interquartile Range
Median = Median Value

NB: Remember to advise patients about driving (see Driving Guidelines).
Do not refer alcohol related blackouts to Syncope Service.
Which of the following non-drug therapies do you use for OH?

1. Bolus water drinking
2. Physical counter manoeuvres
3. Sleeping with the bed head up
4. Small frequent meals
5. Salt
6. Full length compression stockings
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Management

Orthostatic hypotension

**MEDICATION REVIEW**

**Non pharmacological**
- Behavioural modification
- Balance of systolic hypertension and postural hypotension (SPRINT)

**Pharmacological**
- Fludrocortisone
- Midodrine (2RCT)
- Droxidopa
Management

Vasovagal syncope

MEDICATION REVIEW

Non-Pharmacological
- Behavioural modification
- What are their triggers?
- Drink 2 litres of fluid
- Buttock clenching- 1 RCT 243 patients
Management

Check Gait and Balance - refer AHP

Check for injury and think about bone health

Screen for – Delirium and Frailty