THE NORTHERN HOSPITAL

FALLS IN THE ELDERLY

"Belesarius Reduced to Begging", Jacques Louis David, 1781, Oil on canvas, Musée Des Beaux-Arts, Lille

"His lofty stature and majestic countenance fulfilled their expectations of a hero, ... By the union of liberality and justice he acquired the love of the soldiers, without alienating the affections of the people. The sick and wounded were relieved with medicines and money, and still more efficaciously by the healing visits and smiles of their commander,...In the license of a military life, none could boast that they had seen him intoxicated with wine; the most beautiful captives of Gothic or Vandal race were offered to his embraces, but he turned aside from their charms, and the husband of Antonia was never suspected of violating the laws of conjugal fidelity. The spectator and historian of his exploits has observed that amidst the perils of war he was daring without rashness, prudent without fear, slow or rapid according to exigencies of the moment; that in the

deepest distress he was animated by real or apparent hope, but that he was modest and humble in the most prosperous fortune."

Edward Gibbon,
The History of the Decline and Fall of the Roman Empire,
Volume XLI, 1784.

Belisarius was one of the greatest military commanders of all time and was largely responsible for the Emperor Justinian's rebuilding of the latter Roman Empire, albeit relatively briefly, to its former grandeur. His very successes, however, made him many enemies. The Emperor became jealous of his success and came to fear for his own position. According to the Roman historian Procopius in 561 AD Justinian stripped him of all his titles and possessions and he was reduced to begging in the streets of Constantinople.

The painting by Jacques Louis David shows the once great and noble Belesarius in this desperate condition. In the background a soldier stands dumbstruck as he recognizes his former general in this beggar.

It was on the basis of this painting that Jacques Louis David was unanimously "approved" by the French Academy, which alone had the right to public exhibitions. Diderot wrote, "This young man shows the grand manner in the way he has carried out his work; he has soul."

Although later somewhat restored to favor in Justinian's eyes (when the Empire was threatened from the East by the Persians), Belisarius would have been sorely in need of some Emergency "care co-ordination" assessment during his time of "disfavor". Unfortunately none existed in his time and begging was his only option.

In many cases a simple fall is the first indicator that an elderly person has been reduced to desperate circumstances and is no longer able to cope without assistance. Many in their youth would have been vigorous and healthy, perhaps like Belesarius, even great, yet in their old age they live in despair and ignominy often too proud or ashamed to ask for assistance. The elderly patient, who presents with a seemingly minor fall, may in fact present us with the opportunity to realise the extent of the demise to which they have reached. Nothing was available in the Sixth century AD to the great and noble Belesarius in his old age. The elderly of the 21st century however should expect help to be readily at hand and it is up to the medical staff treating their "fall" to recognize their need and to be sensitive to the dignity that they deserve.

FALLS IN THE ELDERLY

Introduction

Falls in the elderly is a common problem and a common cause for presentation to the ED.

Clinical assessment of these patients must include not only the investigation of the immediate circumstances and consequences of the patient's fall, but also a full evaluation of their medical history and social circumstances.

The presentation of an apparently minor fall will often be the first indication that an elderly patient is no longer able to cope in their environment and it is vital to appreciate this fact in order to formulate a safe and appropriate disposition and follow-up plan.

Pathophysiology

The causes of falls in the elderly are diverse, ranging from minor to major significance.

The trauma suffered in the fall will often be of secondary importance when compared to the underlying reason for the fall.

Causes should be considered in two groups:

1. Mechanical:

   Here there is a clear mechanical reason for the fall.

   Considerations will include:

   - Issues related to patient **mobility or visual acuity.**
   - Issues relating to the environment itself, (stairs, lack of railings etc)

2. Syncopal:

   Here there is an underlying medical issue which has lead to a syncopal episode resulting in the fall.

   Considerations may include:

   CVS:

   - Acute coronary syndrome.
   - Arrhythmia.

Hypotension from any cause, in particular:

- **Dehydration**
- **Gastrointestinal bleeding**
- **Medication related.**

CNS:

- Seizure
- Stroke/ TIA

Others less commonly:

- Alcohol related.
- Anemia
- Pulmonary embolism
- Metabolic, (hypoglycemia)

Clinical Assessment

Important points of history:

In many cases a clear history will not be possible from the patient.

It is vital in these circumstances to obtain a clear history of events by direct telephone contact with the institution the patient has come from or from relatives/ carers in cases where the patient has come from home.

Clinical assessment must include not only the investigation of the immediate circumstances of the patient's fall, but also a careful evaluation of their medical history and social circumstances.

Medical assessment:

1. **Establish on history whether the "fall' was a consequence of a mechanical "misadventure" or whether it was possibly secondary to a medical cause (ie a syncope, see also Syncope guidelines).**

   If the injury was due to a syncopal episode, what were the associated symptoms if any? In particular:

   - Light headedness

- Chest pain
- Palpitations
- Shortness of breath

2. Establish the frequency, circumstances and nature of the falls.

   - **In particular establish how long a patient was immobilized on the ground. If this was for a prolonged time period the patient could be suffering pressures sores and/ or rhabdomyolysis and /or dehydration.**

3. Medical history:

   - A full past medical history must be obtained.

4. Medications:

   This is an important and common cause of syncope in the elderly.

   - All medications that are capable of causing hypotension need to be considered and reviewed
   - Enquire specifically if the patient is taking **warfarin**. This will have major implications for the further assessment of any injuries sustained in the fall.

Social Assessment:

1. Establish the nature of the patient's residence:

   - **Nursing home/ hostel or special accommodation/ home.**

2. Establish how the patient normally copes with their day to day activities:

   Considerations here include:

   - Meals, (who prepares these?)
   - Shopping, (who does this?)
   - Finances, (paying the bills)
   - House work

3. Establish the patient's normal functional levels:

   - Mobility, in particular the need for walking sticks or walking frames.

- Are there any chronic pain or other medical issues which may be contributing to mobility problems?
- Does the patient have issues with continence?

4. Establish the degree of supports the patient has if from their own home.

   Considerations here include:

   - **Does the patient live alone?**
   - Amount of family/ friend social contact
   - Local council support, "meals on wheels"
   - Royal District Nursing services.

5. For nursing home patients, establish:

   - Level of cognitive understanding
   - Ability to feed themselves
   - Ability to wash/ shower
   - Level of mobility, (bed bound/ able to walk with aids)

6. Medical care:

   - Is there a family doctor?
   - Does the patient understand their medications?

7. Competency issues:

   - Does the patient have a Medical Enduring Power of Attorney?
   - Does the patient have an Advanced Care Plan?

Important points of examination:

1. Perform a full primary and secondary survey along usual trauma protocols.

   - Establish the nature of any traumatic injury and commence investigation and management accordingly.

2. Vital signs:

- Fever, hemodynamic stability, including postural blood pressure drop, (as appropriate).
- Rule out melena, if hypotensive.

3. Bedside blood glucose.
4. Cognitive screen
   - This may be via a mini-mental sate examination, as appropriate.
5. Visual acuity
6. General examination, including in particular a neurological assessment of the limbs.
7. Mobility assessment:
   - If there are no significant medical issues and no significant injuries, then an assessment of the patient's mobility will be an essential element in the formulation of a disposition plan.

Investigations

These will be done according to indications derived from clinical assessment and the need to rule out underlying pathology.

There will be two arms to investigation:

- Ruling out injury.
- Looking for a possible underlying cause of syncope.

Considerations will include:

Blood tests:

1. FBE
   - Anaemia, infection, thrombocytopenia
2. U&Es, (urgent potassium if rhabdomyolysis is suspected).
3. Glucose
4. CRP, for occult sepsis.

5. INR

   - If on warfarin, or known liver disease.

6. CK levels (if rhabdomyolysis is suspected).

7. Others, as clinically indicated.

Urine:

- FWT and micro and culture:

  UTI is a common cause of disability in the elderly.

ECG:

- This is mandatory in any case of suspected syncope.

Plain radiography:

- These are done according to requirements for injury assessment
- CXR may be appropriate as part of a screen for sepsis.
- **The commonest injury the elderly will sustain in a fall is a fractured neck of femur. Many patients because of their cognitive state will not be able to communicate their distress, nor in many cases will physical examination be any more enlightening. A common reason for an elderly patient not to be able to get up off the ground will be a fractured neck of femur or a fractured pubic ramus.**

  The threshold therefore to x-ray the pelvis/ hips must be low.

CT scan:

The threshold for a cerebral CT scan must be low in these patients.

Indications will include:

- Altered conscious state or confusion
- **Any patient with a head injury who is on warfarin.**
- Suspicion of stroke/ TIA
- **History of recurrent falls:**

Unrecognized acute and /or chronic subdural hematomas are not uncommon in these scenarios.

Subdural hematomas may be the consequence of recurrent falls, but may also be the cause of them.

Management

The important management issues in elderly patients with a fall include:

1. Management of any physical injuries sustained.

2. Prolonged immobilization:

   If there was prolonged immobilization on the ground, then significant additional issues will include:

   - **Rhabdomyolysis, (see separate guidelines)**
   - **Hypothermia**
   - **Dehydration**
   - **Pressure sores.**

3. Investigation and management of any underlying medical problem, leading to syncope.

4. **Assessment of the ability of the patient to cope in their environment:**

   Referral for specialist assessments in this regard will include:

   Physiotherapy:

   Referral to the ED physiotherapist for assessment of mobility and for an opinion on whether discharge from hospital is safe in this regard.

   Care co-ordination:

   Care coordination will also need to assess the patient, regardless of whether they require hospital admission or not.

   They will be able to assess whether the patient is able to cope in their home or institution.

   Care coordination can assist with a range of critical services including:

   - Urgent respite care.

- Urgent placement.
- Urgent Aged Care Assessment by a specialist Geriatrics unit.
- Close follow-up in general, including liaison with a patient's doctor and/ or family, should discharge be possible.
- The care coordinator can also assist in initiating an Advanced Care Plan for a patient where appropriate.

Emergency department pharmacist:

Managing multiple medications poses a significant health issue for many elderly patients. Many in fact will have little understanding of their medications.

Medication related issues are a major contributor to elderly patient morbidity and mortality as well as to presentation to the Emergency Department.

A full assessment of, and rationalization of, a patient's medications is an essential part of the management of any patient who has a medication related presentation to the Emergency Department. Certain medications may need review, education may be necessary and assistance with managing medications with dossette boxes may be appropriate.

Occupational therapy:

Occupational therapy referral may be required to assess a patient's home environment and to provide aids in that environment to help them cope.

Social worker:

Occasionally social work input may also be necessary.

- This may pertain to medical enduring power of attorney issues
- Financial issues
- Where recurrent falls are thought to be the result of elder neglect or even abuse.

Disposition:

1. Traumatic injuries are treated on their merits.
2. Syncopal pathology is treated according to the cause.

Often there will be no immediate medical concern, in which case the issue at hand will be the safe disposition of the patient.

Considerations in this regard will include:

3. **Elderly patients must never be discharged from the Department at night**, unless they can be done so under the direct care of a relative/ friend.

   Observation overnight in the ED or admission to the SSU will often be necessary in order to plan a safe discharge. Allied health assessments may need to be carried out in the morning.

4. Following assessment by the physiotherapist and the care coordinator, discharge home may be deemed to be inappropriate.

   In these cases a general medical admission will be necessary.

For those patients who are able to be discharged, a follow-up plan will need to be formulated. This may simply be a letter to the family doctor, or it may require further specialist assessment on an outpatient basis.

The care coordinator will be able to assist in important follow-up referrals such as urgent Aged Care Assessments.

Note that in less urgent situations patients who are at risk of recurrent falls may be suitable for assessment and follow-up in the **Falls and Balance Clinic,** which again the care coordinator can assist with arranging.

Consideration of a **medical alert alarm device** is also an important issue in those patients who are suitable to be discharged to their home.

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