Older Adult Case Study

Lisa, a widow for the past four years, is 86 years old. She lives alone in a two storey house on the farm and leases the land out. She has a reasonably good income. She was always a hardworking woman helping out on the family farm. She has had varied interests throughout her life and particularly likes music, reading and art and cooking.

She has a son Tom and a daughter Julie, both of who live about 4 miles away from her. Tom, her eldest son is 60 and has his own wife and two children, both of who work in local construction companies. Tom had recent tests confirming he has osteoarthritis, particularly affecting his right hip. He plans to take a break from work and have a hip replacement in the coming months. Lisa no longer drives and depends on Tom to drive her places, including shopping, Mass, the local bank, GP visits, the village library and visiting friends. There is little in the way of local transport which passes her farm.

Lisa has been having increasingly poor health over the past five years. She has a diagnosis of compression fractures of the T12 –L2 vertebrae, which she sustained from a fall at home in the bathroom. Her past medical history includes osteoporosis, hypertension, peripheral neuropathy and her mobility has reduced considerably since she fractured her right hip last year as a result of a fall while getting out of bed. She uses a walker to ambulate outside and sometimes uses it in the house but more often relies on a stick and holding the furniture.

Her memory has been deteriorating over the past couple of years which concerns the family and this problem is made worse by the fact that she denies any problems about her memory and gets frustrated and annoyed with any of her family who try to convince her that this is the case. Julie has shown her the evidence of burned pots, things left on the floor, a tap left running, little food in the fridge and her lack of attention to keeping the house clean. Tom tries to keep his mother’s memory as ‘active as possible’ by asking questions about recent events and prompting her until she gets the answer right. Her family have also noticed that she has some difficulty finding words in conversation and she sometimes asks the same question repeatedly, which frustrates her children. Lisa appears to be able to manage to dress herself but her personal hygiene is questionable. To date she has refused outside help with anything. Now however, the family feel that unless she has this help she will not be able to stay living on her own. They have gone to her GP asking for advice on what to do.

Lisa’s GP has referred her to you at the local primary care clinic for assessment and intervention. You are part of a MDT primary care team that works out of a community based clinic. The team consists of an OT, physiotherapist, GP, nurse, social worker, speech and language therapist and dietician. You have a regular MDT meeting every two weeks to discuss complex cases.

Student Prompt One

1. Briefly discuss the MAIN components of each of your assessments of Lisa. Concentrate on highlighting the main PRIORITIES of each disciplines assessment.

2. As you discuss your assessments draw up a multidisciplinary problem list for this lady.

(30 student work / 10 mins group discussion)
**Physiotherapy:**

**Subjective Ax priorities:**

Question more on mobility levels and use of stick/rollater/furniture (when she uses each and why). Establish baseline mobility indoors and outdoors noting the distance she can walk and limiting factors. Mobility has been deteriorating since hip # - try to establish why. Due to residual weakness, hip pain, balance impairment, forgetting to use rollater/stick. Question pt on her balance with and without aids.

Establish falls history and try to determine cause(s). Include questions regarding the number of falls and contributory factors - weakness from peripheral neuropathy (? footdrop) or recent hip #, pain from vertebral # or hip #, frailty, de conditioning due to decreasing mobility, balance impairment as indicated by use of rollater/stick. Determine whether the patient can get up from the floor and knows what to do in the event of a further fall – link with social supports - personal alarm/mobile phone.

**Objective Ax priorities:**

UL and LL screening exam to include ROM and strength paying particular attention to peripheral neuropathy (? Foot drop) and hip musculature.

Balance assessment including objective measure and dynamic balance activities

Functional assessment to include transfers, gait analysis and exercise tolerance. Mobility assessment with aids, in and outdoors. Stairs assessment. Review safety awareness, carry over and memory during these tasks.

**OT:**

As a primary care OT, the assessment will be carried out in the home.

For any assessment, it is important to remember that Lisa is in denial of any difficulties, so this will have a major impact on the assessment approach.

OT will probably start with a semi-structured interview to assess Lisa’s level of insight into her current difficulties and her families concerns. The interview will focus on Lisa’s ability to carry out self-care, home-related activities and social/leisure activities.

This interview will probably be followed by an assessment of the home environment to determine cause/s of Lisa’s falls. Some home environment assessments that could be used include the SAFER tool, the Westmead assessment, and Home Fast. Some specific falls assessments could include: Falls Efficacy Scale (this would also be useful in establishing Lisa’s insight into her falls and their cause) and Falls Behaviours assessment.

Cognitive assessments: Depending on findings from the initial semi-structured interview, OT will decide how to approach a cognitive assessment. If Lisa appears to have considerable memory and concentration problems, then assessment will most likely be approached through observation of a simple home-based activities – making cup of tea. Safety awareness could also be assessed during functional activity as this has been identified as a problem. There are a number of cognitive screening tools available such as Montreal Cog Ax (MOCA); MEAMS; Addenbrooks assessment. There are also specific memory tests –
Rivermead Memory Behavioural Assessment. But the use of these assessments depends on Lisa’s tolerance for engaging in standardized assessments – agitation, fatigue and concentration.

It is also important to consider interviewing Lisa’s family – if she is in agreement to this

**Medicine:**

**Main components of Medical Assessment:**

**Priorities:**

Identify cause of falls to enable treatment and reduce morbidity
Specifically outrule cardiac cause of falls
Ensure receiving optimum osteoporosis management
Understand concept of blood pressure variability – supine hypertension with orthostatic hypotension and the complexity of anti-hypertensive prescribing in fallers
Cause of peripheral neuropathy? – optimizing management of medical co-morbidities in falls prevention
Possible co-existing mood disorder
Family meeting/Family education re management of dementia
Assessment of capacity/power of attorney

1) Falls

Why is the patient falling? Components on history to review:

**Description of falls:**

Duration since onset of falls
Frequency of falls
Injuries due to falls (GP visits, hospital admissions fractures, injuries)
Location of falls (indoors outdoors)

Distinguishing between the differentials of falls and identify the correct cause

Do falls occur on postural change, times of day, at night?
Prodrome (warning of impending faint. Light headiness/fainting) of presyncope
Is there vestibular or posterior circulation symptoms? Vertigo?
Timing and Triggers of falls

Review of cardiac system – is the aetiology cardiac?
CVS risk factors, family history, Is there loss of consciousness? or suggestion of same? E.g. poor recall of fall.
Occur on turning of neck suggesting carotid sinus hypersensitivity?
Do any of the falls occur from seated position? Or during exertion?

Review of Musculoskeletal system.
Mobility – pattern of decline / particular difficulties e.g. difficulty rising from chair suggesting possible myopathy
Polymyalgia rheumatica, Arthritis, Hip replacement etc

Review of Neurological system:
Parkinson’s disease, Cerebrovascular disease, Normal pressure hydrocephalus? Cervical or lumbar spondylosis? Or nerve root compression secondary to the vertebral fractures

Why does patient have peripheral neuropathy? – is she diabetic?
Deficiency in B12, folate, ferritin? Symptoms of hypothyroidism?
List the causes of peripheral neuropathy

Is there any possibility the vertebral fractures are not due to osteoporosis but secondary to malignant or metastatic disease and subsequent collapse?

2) **Assessment of cognitive impairment:**

MMSE
History and exam
Differentials of cognitive decline: delirium versus dementia versus depression

Delirium: acute versus more gradual decline; suggestion of infection on history, new medication prescribed / increased? Use of psychotropics / opioids etc

Depression: particularly in context of an independent person, now limited functionally and socially isolated. Explore possibility of self neglect due to low mood versus self neglect due to memory difficulties
List the somatic symptoms of depression

Cognitive impairment versus dementia – what is the difference?
With dementia in addition to difficulties in multiple cognitive domains, there is a functional impairment and an effect on relationships etc
List some types of dementia.
Name some common types of dementia and characteristics of presentations of each especially Alzheimer’s disease and Vascular dementia

3) **Assessment and Management of Osteoporosis:**

Non pharmacological treatment (lifestyle measures e.g. exercise, smoking cessation)
Pharmacological treatment (Vit D, Calcium, Bisphosphonates )

4) **Assessment of Hypertension**

Relevance in case history as CVS risk factor
Understand concept of blood pressure variability e.g. supine hypertension with OH and interaction with anti-hypertensive medications
Concept of 24hr BP monitor to assess

5) **Assessment of capacity – Power of attorney**
Assessment priorities:

Explore her own view of communication with her primary communication partners

Her view and view of primary communication partners on the impact of communication difficulties on daily activities and ‘life participation’

Assessment of communication (e.g. ability to initiate, maintain and terminate a conversation, repetition of topics, turn-taking)

Evaluation of the communication environment

Evaluation of communication interaction patterns through (a) observation and (b) caregiver interview:
- Ascertain the reported and observed communication problems, exploring specifically the report of repetitive question asking (e.g. nature of the question, triggers, when it happens, reactions)
- the family / communication partner’s expectation of communication with Lisa
- and any communication strategies currently being used by communication partners.

Assessment of cognitive abilities contributing to communication – liaise with OT

Establish a baseline of receptive & expressive language (e.g. word finding abilities)

Screening of swallow function – detailed case history and consideration of any risk factors that may signal the need for a full assessment

Group discussion prompt:

1. What would be the main items you would discuss at your initial MDT meeting? Concerns?

Discuss assessment findings. It is likely that all disciplines would give a brief overview of their findings.

You will see that there are several areas of overlap in each disciplines assessment. For e.g. the GP and PT will be trying to determine the cause of the falls so will need to discuss each of their assessment findings to ensure they agree on findings – for e.g. rule in or out a musculoskeletal or neurological cause. The SLT, OT and GP will all have a role in assessing cognition therefore can use information form all sources to draw some conclusions. The OT may have used a formal screening tool and may be able to expand on the GPs findings.

As GP, give clarity to group regarding definite diagnoses or differential diagnoses

Update regarding planned or pending investigations and proposed treatment

Inform regarding likely prognosis

The team will draw up a MDT problem list and determine a treatment plan for patient. When drawing up a treatment plan it will be important to discuss aspects of each others assessment that may impact on another’s treatment. For e.g. the PT may wish to have the patients cardiac history determined to ensure patient is safe to commence with an exercise programme. Also if there is a possibility of vertebral fractures these would need to be investigated prior to taking part in exercise.
The OT and SLT will need to consider how much the patient cognitive decline may be as a result of medication and will look to the GP for advice.

The success of all therapists’ rehabilitation may be influenced by the timely treatment of depression (if relevant).

In the MDT meeting as well as the above the team will need to consider the following:

Discuss the immediate safety concerns and put in place any supports at home. Are the family capable of giving more support? Does she need in pt treatment and rehabilitation? Is there an immediate plan in place to cope with another fall? Does she have rehabilitation potential? Agree to communicate as necessary and discuss case again in 2 weeks. Plan for a period of rehabilitation in the primary care centre. Arrange transport if family unable to assist. Try to co-ordinate therapy and GP visits for the benefit of the patient.

2. MDT Problem List

1. Cognitive impairment –possible dementia
2. Osteoporosis
3. Hypertension
4. Peripheral Neuropathy
5. Polypharmacy / disease-medication interaction
6. Reduced mobility with balance impairment and risk of falls
7. Possible concurrent mood disorder
8. Issue of capacity in context of safety concerns
9. Potentially reduced ability to access help (communication/cognitive decline)
10. Potential for increased social isolation
11. ? Adequate nutrition
12. Ethical issues in relation to who is the primary client – Lisa and/or her family
13. Lisa’s ability to make decisions and in the long-term, power of attorney

**Student Prompt Two**

1. Design an effective treatment programme for Lisa.
Think about what each of you as a member of the primary care team can contribute towards this lady’s care and how you will coordinate and communicate with each other to achieve the best possible outcome.

(30 mins student work / 10 mins group discussion)

**PT:**

- ROM and Strengthening programme for UL and LL as necessary emphasising R hip.
- Balance re-education and falls re-education programme.
- Gait re education using correct aid in and out doors. Stairs practice if safe.
- Functional programme to include bed transfers, sit to stand etc
- Liase with OT re home visit to determine activities where balance and mobility most impaired and adapt programme accordingly. ? Joint home assessment to determine safety and ability to return home.
- Involve family to ensure carry over and consistency.

Following a period of rehabilitation the PT will need to make a judgment on the likely physical outcome of pt. Does she have the potential to mobilize safely with an aid in/outdoors? Does she have the potential to manage stairs safely? Is her balance an ongoing issue? Are issues with safety awareness, memory and carry over likely to prevent independent living (in conjunction with other MDT opinions).

**Medicine:**

- Detailed history as above
- Physical exam
- MMSE, Mental state exam
- Assessment of capacity
- Functional assessment

- Investigations: Bloods: FBC, Renal Liver Bone Haematinics, thyroid function, SPEP, ESR, CRP, Vit D
- MSU, CXR, CT brain.

- Referral to Specialist Services: Falls and Blackout, Bone Clinic, Medicine for the Elderly clinic

- Family meeting (educate re dementia care, non pharmacological management of behavioral disturbance)

**SLT:**

- Direct intervention:
  - maximizing ability to make needs known, including communication in emergency situations
  - Support to engage in social opportunities and maintain activities participation
  - Functional program around word finding difficulties which may impact on Lisa’s ability to make her needs know or stay positively connected in her social environment
• Explore the use of aids to support memory in conversations and decrease the need for repetitive questions (diary, memory books) – Liaise with OT
• Periodic re-evaluation and adjustment of goals / approaches
• Periodic re-evaluation or screening of swallow function and intervention if indicated

Indirect intervention:
• Caregiver training strategies: adjusting communication to compensate for the any impaired abilities and capitalize on the spared abilities; communication strategies to ‘connect’ with Lisa

**OT:**

OT must try to establish Lisa’s priorities for intervention within her cognitive abilities. Trying to facilitate a client driven approach to intervention, so include Lisa in decision-making process. As with assessment, it is important to remember that Lisa is in denial of any difficulties, so this will have a major impact on any interventions.

Once cognitive levels have been established, and Lisa’s ability for new learning has been determined, interventions should focus on increasing safety in the home and developing strategies for reduced memory.

Memory: Remedial approach – activities to improve concentration and memory. Compensatory approach: alarms, memory prompts on fridge, calendars etc.

Safety in the home would be considered a priority intervention for Lisa. This will involve home modifications – if Lisa will allow this. Main safety issues appear to be in relation to bathroom and stairs, so this should be a priority area. If Lisa is unable to clearly decide/agree on home modifications, OT should involve family on identifying to what extent Lisa would be in agreement with home modifications – i.e. what equipment is she likely to accept and therefore use.

Occupational engagement and community participation. Lisa was always very sociable so OT should focus on ways to facilitate re-engagement through

  - Investigating transportation options for Lisa
  - Possible attendance at art group/classes
  - Possible attendance at local day centre
  - Involvement of other family members such as grandchildren to reduce social isolation
  - Technology within the home: TV, radio (possibly computer)

**All:**

Social work, dietician involvement.