Common Issues in the Elderly

Laurence Robbins, MD
Associate Professor of Medicine
University of Colorado School of Medicine
Denver, Colorado

Learning Objectives
1. Identify key concepts in systems of care for the elderly
2. Identify common gait disorders in the elderly including Parkinson's Disease
3. Manage common geriatric syndromes

Case Discussion
A 72-year-old woman comes to your office to seek your advice. Her health has been good since an uncomplicated myocardial infarction 3 years ago. Her daughter, a social worker, has encouraged her to transfer the title for her home to her children to protect it for her family if she were to need nursing home care. Her husband died two years ago and she is now the sole owner of the family home.

• She wonders if “all of this is really necessary” because she has “Medigap” insurance. She also says that if she ever needed to live permanently in a nursing home, she would not want to be kept alive and she understands that Medicare would cover her hospice care.

1. Which of the following is true?
   A. She’s correct, Medicare hospice would pay for her nursing home care.
   B. Her Medicare C (“Medigap”) will cover most of the cost of nursing home care.
   C. Putting the home in a trust will immediately protect it for her family.
   D. If her husband were still alive, he could stay in the home if she needed nursing home care under Medicaid.

1. Which of the following is true?
   A. She’s correct, Medicare hospice would pay for her nursing home care.
   B. Her Medicare C (“Medigap”) will cover most of the cost of nursing home care.
   C. Putting the home in a trust will immediately protect it for her family.
   D. If her husband were still alive, he could stay in the home if she needed nursing home care under Medicaid.

27%
18%
23%
32%
Medicare

- At 65 yo, 43% chance of entering a nursing home
- Medicare will only pay for skilled, rehabilitative care in nursing homes (20 days after at least a three day hospital stay; patient pays a co-payment of $141.50 for each day after that, limited to 100 days of skilled care per episode).
- Medicare hospice benefit is for home hospice and does not include cost of inpatient care.

Medicare

- Custodial nursing home care is paid for primarily out of patient's "pocket." Medicaid only pays after "spending down."
- Surviving spouse is often allowed to keep the couple's home, one car and a very limited amount of other assets (as little as $3,000)
- Any asset transfer to family members other than a spouse must occur at least three years prior to the need for nursing home care (five years if in a trust)

2. The largest portion of the Medicare budget is spent on:

A. Rare and expensive surgical procedures
B. Hospital cost in the last month of life
C. Overhead for intermediaries
D. Hemodialysis
E. The 20% of Medicare recipients with five or more chronic diseases

Impact of Multiple Chronic Diseases

- Nearly half of Medicare enrollees have at least 3 chronic conditions; >20% have 5 or more
- Enrollees with at least 3 chronic conditions account for nearly 90% of Medicare's annual budget
- 2/3 of Medicare budget spent on 20% with 5 or more chronic diseases

Case Discussion

- 3 months ago, 71 yo complains of increased falls and weak right knee. Worsening chronic low back pain.
- 3 weeks ago, developed numbness in fingers and began to drop utensils.

© American Academy of Family Physicians. All Rights Reserved.
3. Your next step is:

A. Order CT of head
B. Order TSH, B12, blood sugar
C. Order MRI of cervical spine
D. Order MRI of lumbosacral spine
E. Order EMG of lower extremities

---

Neurological Gait Disorders

- **Peripheral neuropathy**: distal sensory and motor signs only
- **Lumbosacral**: lesion below end of spinal cord (T12) = no upper motor neuron signs
- **Cervical**: upper motor signs: no cranial nerve or gray matter signs (e.g., dementia)
- **Brain**: cr n and gray matter signs, EPS

---

Upper Motor Neuron Signs

- Weakness (not complete paralysis) of a group of muscles (not a single muscle); minimal muscle atrophy
- “Clasp-knife” spasticity
- Hyperreflexia (+/- clonus)
- Spread of reflexes
- Babinski response

---

Cervical Myelopathy

- Cervical myelopathy usually due to degenerative spine changes; may have little neck pain & no radicular symptoms
- Upper motor neuron signs often present
- Paresthesias and loss of position sensation may be caused by cervical myelopathy but may also have peripheral neuropathy
Surgery for Cervical Myelopathy

- Better response to surgery if shorter duration, milder symptoms (better if not walker dependent pre-op)

Management

- Image neck (MRI) if candidate for surgery
- Check B12, TSH, glucose (since he has signs of posterior column sensory loss)

Case Discussion

- 74-year-old man complains of exertional pain in back of thighs that limits walking; pain is worse walking downhill than uphill; some relief with rest and leaning forward
- On exam, normal cranial nerves, DTRs and upper extremity strength; mild weakness of quadriceps bilaterally; labs including alk phos & psa are normal
4. The next step is:
A. Order CT of head
B. Order CT of spine
C. Order CT of lumbosacral spine
D. Prescribe analgesic, order physical therapy
E. Order EMG of lower extremities

Lumbar Stenosis
• Pain greater than neurological findings
• Surgery may reduce pain/improve walking distance but residual disability post op is common
• Surgery may be postponed or avoided if walking disability mild (walking capacity improved in 42%, unchanged 32%, worse 26%)

Case Discussion
• An 80 yo man is referred for evaluation of “possible depression; is he a Ritalin candidate?” He’s accompanied by his wife who describes how much more difficulty ambulating he’s had since esophagectomy for cancer 18 months ago. His medications include hydrochlorothiazide, lisinopril, metoclopramide, valproic acid, and prochlorperazine prn.

Case Discussion (cont.)
• On exam, the patient has a flat affect and blinks little. He has severe seborrhea. He slowly rocks bath and forth in his chair when asked to stand but is unable to propel himself to a standing position. When helped up to a standing position, he has trouble initiating his gait, then takes a few small steps and freezes.

5. Which of the following would you do?
A. Stop the metoclopramide (eg, Reglan)
B. Stop the prochlorperazine (Compazine)
C. Stop the valproate (Dekapot)
D. Stop only 1 and 3
E. Stop all 3
5. Which of the following would you do?

- A. Stop the metoclopramide (eg, Reglan) (41%)
- B. Stop the prochlorperazine (Compazine) (31%)
- C. Stop the valproate (Depakote) (4%)
- D. Stop only 1 and 3 (5%)
- E. Stop all 3 (46%)

Pearls

- Drug-induced parkinsonism can occur with medications not usually considered culprits (metoclopramide, valproic acid, prochlorperazine, etc.)
- Resting tremor, asymmetric rigidity/tremor, and response to Levodopa best predict correct diagnosis of PD

Case Discussion

- The same 80 yo patient returns one week later after withdrawal of metoclopramide. He now can stand without assistance but still has difficulty initiating his gait and walks with small steps. His wife describes how he sometimes gets “stuck” in doorways as he goes from room to room.

6. The best treatment choice now is:

- A. Entacapone (Comtan) 200 mg qid (5%)
- B. Pramipexole 0.5 mg tid (2%)
- C. Carbidopa/levodopa 50/200 controlled release bid (24%)
- D. Amantadine 100 mg bid (3%)
- E. Carbidopa/levodopa 25/100 tid (67%)

When to Start Drug Rx in the Elderly?

- Functional decline: dominant side more affected, interference with ADLs and gait
- Why delay drug treatment?
- Medications often associated with side effects in elderly & don’t prevent progression
- Cost of medication is high
Medications for PD

- Anticholinergics (e.g., Artane, Cogentin)
- Amantadine (Symmetrel)
- MAO Inhibitor (Eldepryl, Azilect)
- Carbidopa/L-dopa (Sinemet)
- Dopamine agonists (e.g., Parlodel, Mirapex)
- COMT inhibitors (e.g., Comtan)

Carbidopa/levodopa (Sinemet)

- Most effective med for gait (bradykinesia, rigidity); tremor response variable
- Carbidopa prevents peripheral breakdown of levodopa; > 75 mg daily for max effect
- Begin 25/100 bid or tid; may switch to 10/100 or 25/250 as dose increased; avg patient needs @ 500 to 1,000mg L-dopa/day
- 50/200 SA greater cost, tricky to use
- Avoid taking regular with food but eat with SA

Carbidopa/levodopa is the most effective medication for PD; optimize dose before adding other drugs in the elderly
- Anticholinergics & amantadine have little role in treated elderly PD patients
- COMT inhibitors are very expensive for modest gain
- Dopamine agonist more likely to cause delusions/hallucinations

Case Discussion

- An 87 yo nursing home resident returns from the hospital after treatment for wrist fracture. She completed a course of antibiotics and takes prn oxycodone for pain. She has frequent incontinence of small volumes of liquid stool.

7. Your first step is:
   A. Order test for C. difficile
   B. Order stool culture
   C. Perform hemoccult test
   D. Arrange colonoscopy
   E. Check for fecal impaction
Case Discussion

• Two days later, the patient develops severe diarrhea and has a temperature of 38.5°C (101°F). White count is 16,000. Clostridium difficile toxin titre is positive.

8. Your next step is:

A. Loperamide 2mg after each loose stool
B. Begin vancomycin 125 mg qid
C. Begin metronidazole 500 mg tid
D. Begin metronidazole 250 mg tid
E. Begin ciprofloxacin 250 mg bid

C. Difficile in the Elderly

• Clostridium difficile is common due to frequent exposure to antibiotics
• Toxin titer correlates with illness severity
• Rx guidelines changed in 2007; if 2 or more factors (age>60, temp>38.3, albumin <2.5, WBC >15,000, creatinine increase 50%), use vancomycin (note: 125 mg po qid as effective as higher doses)

9. The most common cause of uncorrectable visual acuity > 70 years is:

A. Macular degeneration
B. Cataracts
C. Glaucoma
D. Diabetic retinopathy
E. Presbyopia

9. The most common cause of uncorrectable visual acuity > 70 years is:

A. Macular degeneration
B. Cataracts
C. Glaucoma
D. Diabetic retinopathy
E. Presbyopia
Age-Related Macular Degeneration (ARMD)

- Leading cause of new blindness >55 yo; 1 million new cases in next 5 yrs
- Macula has highest concentration of photoreceptors in retina
- Provides visual acuity and color vision; degeneration leads to loss of central vision (impairs reading, face recognition, driving)

Case Discussion

What causes this type of visual loss?


10. What causes this type of visual loss?

A. Age-related macular degeneration
B. Cataracts
C. Glaucoma
D. Diabetic retinopathy
E. Presbyopia

Glucoma: Definition

- Characteristic optic neuropathy and visual field changes often, but not always, associated with increased intraocular pressure.

11. Presbycusis is typically associated with the reduction in:

A. Hearing threshold at all frequencies
B. Hearing threshold at higher frequencies
C. Hearing threshold at lower frequencies
D. Hearing threshold in midrange frequencies
E. Speech discrimination only
11. Presbycusis is typically associated with the reduction in:

- A. Hearing threshold at all frequencies
- **B.** Hearing threshold at higher frequencies
- C. Hearing threshold at lower frequencies
- D. Hearing threshold in midrange frequencies
- E. Speech discrimination only

![Typical presbycusis: blue line]

---

**Case Discussion**

- An 82 yo man develops a pressure ulcer on his left lateral malleolus that is covered by a thick eschar.

**12. The most appropriate management is:**

- A. Apply collagenase with occlusive dressing
- **B.** Surgical debridement
- C. Apply wet to dry dressings
- D. Apply biofilm
- E. Apply platelet-derived growth factor cream

---

**Case Discussion**

- A 78 yo woman with history of osteoarthritis comes to your office for three week history of early morning shoulder and hip discomfort. Labs are normal except for erythrocyte sedimentation rate of 52 mm/h.
13. You recommend the following treatment:
   A. Indomethacin 25 mg bid
   B. Naproxen 250 mg bid
   C. Prednisone 60 mg daily
   D. Prednisone 15 mg daily
   E. Oxycodone 10 mg q 4h prn

## Polymyalgia Rheumatica
- Rare <50yo, avg age 70
- Bilateral aching/morning stiffness (> 30 minutes) for at least one month, and involving at least two of the following three areas: neck or torso, shoulders or proximal regions of the arms, and hips or proximal aspects of the thighs
- Sed rate >40 or elevated C-reactive protein

## Case Discussion
- An 84 yo woman has repeated falls due to near syncope in the nursing home, most often when she is returning to her room after lunch or dinner. Her medications include HCTZ 25 mg daily and lisinopril 10 mg daily for hypertension.

14. Which of the following should you do?
   A. Stop the hydrochlorothiazide
   B. Stop the lisinopril
   C. Start fludrocortisone
   D. Encourage the staff not to allow her to stand up for 45-60 minutes after a meal
   E. Begin offering smaller more frequent meals
Postprandial Orthostatic Hypotension

- Syndrome of orthostatic hypotension occurring 30-45 minutes after a meal
- May be ameliorated by caffeine or smaller meal
- Prevent by having patient remain seated for 45 minutes after meals and avoiding hypotensive medications at mealtime

Postprandial Orthostatic Hypotension

- Postprandial hypotension or orthostasis are common in the elderly and should be considered in the differential diagnosis of near syncope or syncope
- Caring for patients in nursing homes may require re-thinking of conventional wisdom (e.g., small frequent meals not feasible)

Answers

1. D
2. E
3. C
4. D
5. E
6. E
7. E
8. B
9. A
10. C
11. B
12. B
13. D
14. D