Mobility and Functional Assessment

Geriatrics Interclerkship
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Sarah McGee, MD, MPH
What is a fall?

- Unintentional loss of balance in which the person comes to rest on the floor/ground/lower level
- Without loss of consciousness (syncope)
- e.g. Standing to chair, bed or floor
  - Chair to floor
  - Bed to floor
Why are we concerned about falls?
Falls are common but not normal

- 1/3 of community living elders fall each year
- 50% of elders living in LTC fall each year
- ½ of all falls are recurrent (a prior fall predicts a future fall)
- Falling is not a normal part of aging
- Falling is a nonspecific sign of illness
A fall may be the presentation of acute illness in older adults and what prompts medical attention. Evaluation needs to include management of the acute illness and injury as well as predisposing and chronic conditions.
Mortality

- Accidents (commonly falls) are the 6th leading cause of death
- Clustering of falls is associated with a high 6 month mortality
- Long lie is associated with an increased risk of death in the next year
- Falling increases the mortality rate of patients with Alzheimer's Disease
Morbidity

- 4-6% of falls result in a fracture
- 1-2% of falls result in a hip fracture
- 1 in 10 falls result in serious injury
- >50% of older adults with a fall related hospitalization are discharged to a nursing home
- Falls account for 10% of ER visits and 6% of urgent hospitalizations for older adults
Other Consequences of Falls

- Fear of falling
- Decreased activity
- Loss of function/ADL’S
- Nursing home placement
- Mood disorders
Risk Factors for Falls

- Age > 80
- History of falls
- Medications
  - Multiple
  - Psychotropic
- Visual impairment
- Functional impairment
- Depression
- Arthritis
- LE muscle weakness
- Impaired balance
- Gait abnormality
- Foot problems
- Environmental factors
- Use of assistive device
Risk factors are cumulative

- Risk of falling increases with the number of risk factors
- 8% with no risk factors fell
- 78% with 4 or more risk factors fell
Risk Factors

- Few falls have a single cause
- Most falls are multifactorial and result from interactions between predisposing factors (acute and chronic) and environmental factors
Dynamic Balance

- Sensory input: visual
  - vestibular
  - proprioception
- Central integration
- Musculoskeletal response
How many have cared for a patient who has fallen?
Work up
History

- Ask specific questions about the circumstances of the fall
- Ask about prior falls
- Ask about associated symptoms
- Ask about co-morbid conditions ie prior stroke, PD, arthritis
- Review medications
- Ask about functional status
Consider the environment and activities

- Living space: rugs, cords, lighting, clutter, thresholds, stairs
- Bathroom: wet surfaces, bathing
- Kitchen: high cabinets, food prep
- Bedroom: height of bed
- Outside: uneven surfaces, weather
Physical Examination

- Orthostatic BP and pulse
- Consider postprandial assessment
- Vision
- Neurologic
- Rheumatologic
- Examine the shoes and feet!
- ADL assessment
- Gait and balance assessment
Gait and balance assessment

- Observation is critical
- Rise from a chair
- Timed ‘Get up and Go’
- Gait speed (10 meter walk)
- Tinetti scale
Photo by Etta Clark from the books
Growing Old Is Not For Sissies, I and II
Timed ‘Get up and Go’

- Validated for use with older adults
- Correlates with ADLs and independence
- Rise from a chair, walk 10 feet, turn, return to chair and sit down
- 10-20 sec normal, >20 sec abnormal and needs further assessment
Effective Multi-factorial Interventions for Prevention of Falls

- Gait training/assistive device training
- Review and modify medications
- Critically evaluate need for psychotropic medication
- Exercise programs (strength and balance)
- Treat orthostatic hypotension
- Modify environmental hazards and activities
- Treat cardiovascular disorders
Functional Status:
Ability to perform daily activities

- Advanced ADLs
- Instrumental ADLs
- Basic ADLs
Functional Assessment

- Ask or Observe: Do not assume
- Ask patient and verify with caregiver
- Ask specifics
- May need to ask individuals separately
- Watch for discrepancy between report and performance
ADL Performance Screen

Task: Don/doff shoe or sock

Observe for:

- Ease of reaching feet, pain, flexibility
- Appropriate footwear and socks
- Toenails ie long and in need of care
- Speed by which they are able to accomplish the task
ADL Performance Screen

Task: Pick up an object from the floor

Observe for:

- Agility
- Loss of balance
- Flexibility
- Dexterity