FALLS IN THE ELDERLY

❖ Epidemiology of non-syncopal falls

• an event that results in a person inadvertently coming to rest on the ground or other lower level (not as a result of loss of consciousness).

• Common: one-third of community-dwelling elderly and 50% of institutionalized elderly fall; 50% who fall do so more than once.

• Mortal and morbid: accidents are the seventh leading cause of death in the elderly, and such accidents are mostly due to falls (men >> women); 5-10% of falls result in serious soft-tissue injury; 5% result in fracture, 1% result in hip fracture; 3% of fallers have a long lie, 50% can’t get up without help; 40-73% of fallers develop fear of falling, 41-43% curtail activities; falls are a strong predictor for NH placement.

❖ Pathophysiology

• almost always multifactorial involving an interaction of intrinsic and environmental factors.

• Intrinsic factors: sensory deficits, orthostatic hypotension, gait and balance changes, musculoskeletal changes, cognitive impairment and medications.

• Environmental factors: poor lighting, clutter, loose rugs, ill-fitting clothes, wires, wet floors, etc.

❖ History

• What, where, when, why? (including environment)

• Premonitory symptoms?

• Problems with gait and balance?

• Incontinence? (slip and fall)

• Chest pain? (arrhythmia or ischemia)

• Hearing, eyesight, sensation, memory problems, depression

• Drug/ETOH abuse?

• Ask family.

• Medications—over-the-counter and prescribed

❖ Physical exam

• Postural BP

• Skin for turgor

• HEENT—visual acuity, gaze preference, nystagmus, visual fields, hearing, carotid bruits, ROM at neck

• Chest—rales, egophony

• Cardiac—AS murmur, arrhythmia, gallops

• Extremities—corns, calluses, bunions, long nails, ill-fitting or assym worn shoes, ulcers

• Neuro—MSE, focal motor deficits, proprioception and vibration, "Get Up and Go Test" or Tinetti gait and balance assessment

❖ Labs and diagnostic evaluation (as indicated by sx/signs)

• CBC— infection, anemia

❖ Management

• Ask questions about falls routinely
- Electrolytes, BUN, creatinine—volume status
- Glucose—diabetes or hypoglycemia
- Calcium—delirium
- Vitamin B₁₂—peripheral neuropathy, dementia
- Thyroid function tests
- Urinalysis—R/O infection PRN
- Electrocardiogram—arrhythmia, MI
- Chest x-ray—CHF, pneumonia
- CT/MRI Head—SDH, hydrocephalus, tumor
- Toxicology screen and ETOH level PRN
- Echocardiogram—valvular lesion if suspected

- Weigh risks and benefits of meds
- Review all over-the-counter and prescription meds
- Treat orthostatic hypotension: adjust meds, mineralocorticoids, graded-pressure hose
- PT and OT for assistive devices and gait training
- Strength and balance training
- Instruct patient how to arise from a fall
- Home assessment for environmental hazards

Tinetti ME et al. A multifactorial intervention to reduce the risk of falling among elderly people living in the community. NEJM 1994;331:821-827
