

SCCEP 2013 LLSA Course Article 7

Older Patients in the Emergency Department

Samaras N, et al. Ann Emerg Med 2010;56:261-269.

Article: Review from *Annals*. As the baby boomers age, an increasing number (12-24%) of ED visits are geriatrics, a population that often presents atypically, with high incidence of cognitive disorders, co-morbidities, polypharmacy and depression. Increased frailty and illness severity, and delays in diagnosis contribute to more adverse outcomes in this group. The article reviews common geriatric presenting conditions and suggests simple and effective evaluation & management strategies. It discusses age-related changes in common presentations, examines the "yield" of different diagnostic approaches and lists the underlying medical problems present in "social" admissions. Emphasis is on targeting "high-risk" patients.

Epidemiology

1. **12-24 % of all ED visits**, more frequent than young adults (20-33% more)
2. Visits by patient 65-74 years old increased 34% from 1993-2003
3. **Arrive sicker, more often by EMS and more often admitted (RR2.5-4.6)**
4. **5-Fold higher ICU admit rate**
5. More likely to be mis-diagnosed and D/C'ed with unrecognized & untreated problems

Conditions Frequently Encountered

1. **Neuropsychiatric Disorders: Impaired MS in 25% of elderly presenting to ED**
 - a. **Delirium:** By definition due to underlying condition
 - i. 7-10% of elderly in ED, increased admissions and mortality
 - ii. 50% of delirium pts also have dementia
 - iii. Studies show delirium diagnosed in ED with high specificity, low sensitivity
 - iv. Confusion Assessment score has high sensitivity and specificity. Positive screen consists of positive to # 1 and 2 and either #3 or #4
 1. Acute change in mental status from the patient's baseline?
 - 2a. Difficulty focusing attention, easily distractible, or having difficulty keeping track of what was being said?
 - 2b. Behavior fluctuates during the interview?
 3. Was the patient's thinking disorganized or incoherent?
 4. Overall, how would you rate this patient's LOC?
 - alert (normal - only negative answer)
 - vigilant (hyperalert) or lethargic, stupor, coma
 - b. **Dementia;** Definitive diagnosis beyond scope of ED, but Six-Item screener useful. A score ≤ 4 out of 6 possible indicates probable cognitive impairment
 - i. What year is this?

- ii. What month is this?
- iii. What is the day of the week?
- iv. What are the 3 objects I asked you to remember?
 1. Apple
 2. Table
 3. Penny

c. Depression: affects up to 1/3 of elderly ED patients. ED depression Screening Instrument (DSI) is a three part screening test. One positive answer = positive screen

- i. Do you often feel sad or depressed?
- ii. Do you often feel helpless?
- iii. Do you often feel downhearted and blue?

2. Falls

- a. Main cause of hospital admissions for elderly ED patients (15-30%)**
- b. Targeted interview (CATASTROPHE)** may identify underlying pathology
 - i. 20% of syncope present as unexplained falls
 - ii. Fall may also be due to acute illness, infarction, CVA, abuse
 - iii. High Risk Factors
 1. Inability to recall fall's circumstances
 2. Inability to get up on one's own
 3. Inability to walk in ED
 4. Recurrent falls
- c. Fractures;** 4-6% of falls cause with Hip being 1-2%, also vertebral, pelvic fracture (which carry a higher risk of bleeding than in the young)
- d. Increased risk of brain injury** due to atrophy, stretching of bridging veins
 - i. Trivial injuries may cause bleeds in elderly
 - ii. Subdurals may not present for weeks or months
 - iii. **Scan Scan Scan** and observe if needed

3. Coronary Disease

- a.** 30% AMI occur over age 75 & 60% unstable angina admits are older than 65.
- b.** 20% of elderly ED patients have dyspnea or CP as presenting complaint
- c. Increased index of suspicion** due to frequent atypical presentations & worse outcomes
 - i. May present as SOB, fall, syncope, N/V
 - ii. Only 57% of STEMIs older than 85 have CP as their CC
 - iii. EKG more often non-diagnostic in Non-STEMIs above age 85
 1. LBBB on ECG seen in 34% of STEMI pts over 85, 5% below 65
 2. Important to get old EKGs
- d.** Decreased use of ASA and B-Blockers in elderly, decreased use of tPa
 - i. due to atypical presentations, diagnostic dilemma, unclear risk benefit
 - ii. bigger factor for decrease treatment is age itself
 - iii. there is a lack of data on coronary treatment strategies/elderly functional status

4. Polypharmacy and Adverse Drug Effects: 11% of ED visits versus 1-4% overall

- a. Higher rates of med use (4.2/day), altered pharmacokinetics and pharmacodynamics
- b. 3Med classes account for 48% of adverse drug visits in elderly
 - i. **Oral Anticoagulants/antiplatelet agents: Warfarin, ASA, Plavix**
 - ii. **Diabetes Drugs:** metformin, **insulin**, glyburide etc
 - iii. **Narrow therapeutic index meds; digoxin** and dilantin

5. Alcohol and Substance Abuse: 5-14% in elderly ED pts, only 21% of whom are detected

- a. **ETOH intoxication, withdrawal and mood disorders seen**
- b. Illicit drug use a rare but growing problem in elderly
- c. Substance abuse often related to prescription meds; **opioids and sedative/hypnotics**

6. Abdominal Pain; 3-13% of ED visits in the elderly

- a. Surgery rates are two-fold, mortality 6-8 x greater than younger patients
- b. Diagnostic accuracy in ED is 40-82%,
 - i. Discrepancies most often with gallbladder, non-specific and diverticulitis
 - ii. CT improves diagnostic accuracy, alters surgical and admission decisions.
 - 1. Used in almost half of elderly pts with abd pain.
 - 2. Age is major risk for contrast nephropathy: US and non-contrast CTS
- c. More readily admit and perform CT on elderly ED patients with abdominal pain

7. Infections CC of 4% of ED patient. **Presentations atypical, mortality higher**

- a. Most common are Pneumonia, UTI, Sepsis and Bacteremia
- b. Falls or delirium may be presenting complaint, fever and tachycardia may be absent
 - i. Appendicitis presents classically in only 20% of patients
 - ii. Systematic protocol for identifying SIRS had a sensitivity of only 11%.
- c. Age related bacteremia mortality: < 65 yo = 15%, 65-84 yo = 20%, > 85 yo = 26%

8. Social Cases, the Search for Hidden Illness

- a. Functional decline may be result of acute or subacute illness
- b. 9% of ED admits were "social" in one study, but 51% had underlying acute illness
- c. In another study, 1 year mortality of such patients was as high as 34%

Elder Abuse and Neglect: Prevalence in US approximately 10% (broadly defined)

- a. Battery, psychological abuse, abandonment, exploitation, neglect
- b. May be intentional or unintentional
- c. APS review showed 66% of their clients had ED treated injury in previous 5 years
Only 9% of these visits resulted in appropriate referrals

Target "High-Risk" Elderly: Seniors At-Risk Tool: Two or more "yes" answers

1. Before the illness or injury that brought you to the ED, did you need help you on a regular basis? (yes)
2. Since the illness or injury that brought you to the ED have you needed more help than usual to take care of yourself? (yes)
3. Have you been hospitalized for one or more nights during the past 6 months ? (yes)
4. In general, do you see well? (no is a "yes" answer)
5. In general, do you have serious problems with your memory? (yes)
6. Do you take more than 3 different medications every day? (yes)

Conclusion:

1. Older people increasingly visit ED, and we can't keep them out
2. Need knowledge of atypical presentations and complex acute medical and psychosocial issues of this population
3. Targeted approach may help
4. Appropriate use of available screening and assessment tools