TRAUMA AND THE GERIATRIC PATIENT

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ELDERLY PATIENT ARE NOT JUST OLDER ADULTS
Fraility is like pornography, it is hard to define but you recognize it when you see it.

Anonymous Clinician
Canadian Initiative on Frailty and Aging
“A sea of Geriatric Icebergs”

Lawrence Rubenstein, Geriatrician

Misiaszek, BC 2002
The fundamental goal of the GEM initiative is to improve health care delivery to seniors presenting to the ED.

GEM Nurses screen and assess elderly patients at high risk and coordinate further assessment, care and follow-up.

Serve as consultants and in some cases, direct caregivers for elderly patients as well as their advocates.

GEM Nurses increase capacity within the existing health care system to better manage senior patients.
PRINCIPLES OF GERIATRIC EMERGENCY MEDICINE

1. The patient’s presentation is frequently complex.
2. Common diseases present atypically in this group.
3. Confounding effects of comorbid disease must be considered.
4. Polypharmacy is common and may be a factor in presentation, diagnosis and management.
5. Recognition of the possibility of cognitive impairment is important.
6. Some diagnostic tests may have different normal values.

The likelihood of decreased functional reserve must be anticipated.

Social support systems may be inadequate, and patients may need to rely on caregivers.

Knowledge of baseline functional status is essential in evaluating new complaints.

Health problems must be evaluated for associated psychosocial adjustment.

The ED encounter is an opportunity to assess for important conditions in the patient’s personal life.

THE GERIATRIC PUZZLE
**BACK TO THE CASE**

- 74 year old man
  - Assumed to be high functioning at baseline
- Fall 10 ft from ladder
- R sided chest pain and difficulty breathing
- Pain R hip and pelvis
- Abrasion above R eye
- Collared and boarded
- Previous medical history
  - Controlled A. Fib taking coumadin
  - Hypertension taking metoprolol

**Vital Signs**

<table>
<thead>
<tr>
<th>BP</th>
<th>P</th>
<th>RR</th>
<th>temp</th>
<th>SpO2</th>
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<tbody>
<tr>
<td>140/70</td>
<td>74 irreg</td>
<td>22</td>
<td>36.3</td>
<td>92%</td>
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74 YEAR OLD MAN

- High risk of developing an acute delirium
- Higher mortality rate (15-30%) when compared to mortality rate of younger adult (4-8%)
- Tolerate injury less well than younger patients
- Experience higher incidence of complications
  - End stage organ failure
  - Infections
- Experience rapid cognitive and functional decline
- Require rapid and aggressive intervention within the first few hours to support full recovery
DELIRIUM

- An acute confusional state with sudden onset requiring immediate medical attention
- Can result in death
COMON CAUSES OF DELIRIUM

- I - infections
- W - withdrawl
- A - acute metabolic
- T - toxins, drugs
- C - CNS pathology
- H - hypoxia
- D - deficiencies
- E - endocrine
- A - acute vascular
- T - trauma
- H - heavy metals
**R Sided Chest Pain and Difficulty Breathing**

- Multiple rib fractures or lung contusions are poorly tolerated
  - Can result in sudden deterioration and respiratory failure

- Pre existing pulmonary disease

- Potential for pneumonias and nosocomial infection

- Adverse effects of analgesia and sedatives

- Hypoxic state contributes to organ perfusion and potential for delirium
Pain in Hip and Pelvis

- Age predisposes elderly to osteoporotic complications
- Risks associated with pain
- Risk for rapid deconditioning
  - One day in bed requires one week to recover to baseline
- Potential loss of mobility and psychological implications
ABRASION OVER R EYE

- High risk for subdural hematomas
  - Anticoagulated
  - Normal brain shrinkage predisposes elderly to subdural hematomas
  - Signs are often subtle and may take days to weeks

- Potential long term effects associated with subdurals

- Symptoms can be misinterpreted as dementia
Collared and boarded

- Potential for skin breakdown
- Potential for urinary incontinence or retention
- Extreme discomfort
- Sensory and/or perceptual deprivation
- Decreased mobility
VITAL SIGNS

- Misleading blood blood pressure (140/70)
  - Beta blocker and hypertension

- Aging cardiovascular system can be unpredictable
  - Narrow margin for “over resuscitation”

- Hypoperfused organs is directly related to mortality
Early identification and aggressive treatment can significantly improve recovery and reduce morbidity and mortality in the elderly.
REFERENCES

