Frailty

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Objectives

- Define the term “frailty”
- Identify patients who meet the criteria for frailty
- Identify interventions for the frail patient
Why Is This New?

But I have heard this expression for a LONG time?

• This is a field of study that is rapidly expanding in:
  • Publications
  • Definitions
  • Screening Tools
  • Biological Understanding
  • Clinical Utility
Why Frailty Matters
Incidence

- Just think about the size of the always increasing aging population...
- 3-7% of 65-75 year olds
- 20% of those >80 years old
- 33% of those >90%
Why Frailty Matters

- Up to 15% of community dwelling older adults
- A higher percentage of residents of assisted living communities
- Prevalence increases with age
- All will likely meet criteria if live long enough
POOR OUTCOMES!

- Increase incidence of falls
- Worsening mobility
- Social withdrawal
- Worsening ADL disability
- Delirium
- Increase hospitalizations
- Cognitive decline
- Death
What is frailty?

A person must exhibit 3 out of 5 of the following:

- Low physical activity
- Muscle weakness (decreased hand grips)
- Slowed performance
- Fatigue or poor endurance
- Unintentional weight loss
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<th>Criteria for Characterizing the Frail Elderly Person</th>
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| 1. Clinical criteria | Multiple comorbidities  
Polymedication  
Frequent hospitalizations  
Repeat falls  
Sensory deficit  
Urinary incontinence |
| 2. Functional criteria | Dependency in the basic activities of daily life  
Dependency in the instrumental activities of daily life |
| 3. Socioeconomic criteria | Lives alone  
Recently widowed  
Institutionalization  
Age >80 y  
Low economic status |
| 4. Cognitive-affective criteria | Depression  
Cognitive deterioration |

Adapted from Martínez Martín et al.²⁵
The Downward Spiral...

- More likely to become disabled, hospitalized, and have more health problems
- Susceptible to infection
  - Simple infections may even result in death
- Loss of muscle mass
- Inability to prepare meals increases malnutrition
Chronic Undernutrition
[Inadequate intake of protein and energy; micronutrient deficiencies]

→ Anorexia of aging
→ Neuroendocrine Dysregulation
→ ↓ Total Energy Expenditure
→ ↓ Activity

↓ Walking Speed
↓ Disability
↓ Dependency
↓ Immobilization
↓ Impaired balance
↓ Falls & Injuries

↓ Metabolic Rate
↓ Strength & Power
↓ VO₂ max
↓ Insulin sensitivity
↓ Osteopenia
↓ Disability

Loss of muscle mass
Sarcopenia

Disease Mediations
Aging: Senescent musculoskeletal changes
Negative Energy Balance
Negative Nitrogen Balance
Catabolic state
Weight loss
Chronic inflammation/Cytokines

↓ Taste, smell
↓ Poor dentition
↓ Dementia
↓ Depression
↓ Illness
↓ Hospitalization

↓ Acute illness
↓ Medication (e.g., sedating)
↓ Stressful life events
↓ Falls
**Sarcopenia**
- Skeletal muscle loss
- Poor muscle quality

**Physical Function Impairment**
- Weak muscle strength
- Slow gait speed
- Poor balance

**Frailty**
- Deficits accumulation
- Fatigue
- Sedentary behaviour
- Weight loss
- Cognitive impairment
- Social isolation
Frailty Tools - Which One?

No consensus on how to best measure it!!!
Goals for Frailty Interventions

- Improve quality of life
- Prevent worsening of chronic diseases
- Reduce risk for adverse or catastrophic outcomes
- Risk assessment to guide therapeutic options and goal setting
Treating Frailty

- Individualized (determine goals & priorities of care)
- Coordinate services- TEAM based care for inpatients and outpatients
- Treating underlying disease process
- Medication management (BEERS list)
- PT/OT - EXERCISE
- Nutrition
- Pain management
- Fall prevention
- Environmental assessment
- Encourage socialization
- Palliative Care approaches – sometimes less is better……
Prevention

- Manage comorbidities – DM, CHF, HTN, PVD
- Daily exercise
- Keep the mind active (i.e. crossword puzzles, reading, socializing)
- Treat depression
- Seek treatment of medical and psychiatric problems
- Healthy diet
Interventions
On-Line Resources

Frailty.net is an international educational resource that aims to help geriatricians, primary care physicians and other health care professionals involved in the care of older persons implement frailty into clinical practice.

http://www.frailty.net
Questions?

Cartoon:

"YOU'RE DELIBERATELY PUTTING YOURSELF AT RISK OF ALL HEALTH BY BEING OVER 65..."
References


Ko, F.C. (2011); Clinical Geriatrics in Medicine; 27(1):89-100


