

Beyond SPICES & Beers: Geriatrics in the Field Presentation Notes

Objectives

- Explain the pathophysiology of aging and implications for practice
- Identify and list risk factors for common geriatric syndromes
- Recognize atypical presentations of older adults
- Differentiate between delirium and dementia
- Explain special considerations when caring for older adults
- List types of medications that should be avoided in the older adult population

Pathophysiology of Aging & Implications for Practice

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| <p>Cardiac/Vasculature Pathophysiology</p> <ul style="list-style-type: none"> • Max HR and aerobic capacity decrease • Reduced response to catecholamines and decreased baroreceptor activity • Cardiac dilation occurs • Aortic and large artery thickness and stiffness increases – loss of vasculature elasticity • Prolonged contraction and relaxation times • Decreased number of pacemaker cells in SA node • Thickened aortic and mitral valves along with calcium deposits | <p>Cardiac/Vasculature Implications</p> <ul style="list-style-type: none"> • VS can be _____ <ul style="list-style-type: none"> ○ Hypoperfusion can be present when SBP < 120 ○ Tachycardia can be present when pulse > 80 • 50% of older adults have _____ EKGs <ul style="list-style-type: none"> ○ QT prolongation more common in women than men ○ Men have more major EKG changes than women • Decreased _____ to cardiac medications and longer half-life • Chest pain presentation often points to a _____ cause |
| <p>Pulmonary Pathophysiology</p> <ul style="list-style-type: none"> • Less pulmonary reserve and decreased elasticity of alveoli • Upper airway resistance and chest wall stiffens • Increased residual volume • Loss of intercostal muscle strength • Cough less effective | <p>Pulmonary Implications</p> <ul style="list-style-type: none"> • Older adults _____ dyspnea due to sensory misinterpretations • _____ ability to clear mucous causing risk for aspiration, infection, atelectasis • Often difficult to wean off ventilator • Faster and shallower breathing and increased energy expenditure to breathe • _____ by healthcare professionals as respiratory distress |

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| <p>Gastrointestinal Pathophysiology</p> <ul style="list-style-type: none"> • Decreased liver size and blood flow • Impaired clearance of drugs in the liver and diminished protein binding • Slight decrease in stomach acid production • Decrease peristalsis/mobility • Delayed gastric emptying • Decreased calcium absorption | <p>Gastrointestinal Implications</p> <ul style="list-style-type: none"> • Distribution, metabolism, and excretion of drugs is _____ • Higher incidence of _____ between antacids, food, and drugs • _____ risk of GI bleed when given NSAIDs • Vulnerable to _____ • High risk of constipation or bowel obstruction especially if taking opioids or anticholinergics • Older adults _____ epigastric pain as chest pain and vice versa |
| <p>Neuro Pathophysiology</p> <ul style="list-style-type: none"> • Small decrease in brain mass • Decrease in blood flow to brain • Altered neurotransmitters • Slowed processing and reaction time • Decreased sensory nerve action potential amplitude • Decreased thermal sensitivity and temperature regulation | <p>Neuro Implications</p> <ul style="list-style-type: none"> • _____ reaction time and cognition • _____ attention and memory • _____ risk for falls • Increased vulnerability of delirium • Speak _____, clearly, and provide time for processing • Confusion doesn't always indicate a neuro problem! |

Renal, Endocrine, Musculoskeletal implications

- Renal: _____ drug clearance – increased risk for toxicity
- Renal: Decreased ability to respond to hypo/hypervolemia
- Endocrine: Impaired thermoregulation, difficulty _____ body temperature, decreased ability to sweat
- Endocrine: Increased risk for _____
- Musculoskeletal: May misinterpret heart and lung diseases as musculoskeletal

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| <p>Sensory Pathophysiology</p> <ul style="list-style-type: none"> • Decreased perception of pain • Pupil response may be delayed or absent due to glaucoma, previous stroke, eye surgery • Hearing impairments due to anatomical changes in the ear or sensory nerve loss/damage • Difficulty speaking due to dental issues | <p>Sensory Implications</p> <ul style="list-style-type: none"> • No reaction to unpleasant odors or smoke – take these calls very seriously! • _____ before doing • Increase _____ when touching patient • Sit or stand at eye level, use gestures and ensure good _____ • Not reacting to noise, paranoid behavior, or a blank look may indicate inability to _____ |
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| | <ul style="list-style-type: none"> • _____ vision impairment is a normal part of aging when doing a neuro exam • Poor _____ perception or coordination may be a normal part of aging, but consider implications for rule out stroke • Bring hearing aids and dentures to hospital |
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Geriatric Syndromes

Geriatric Syndromes Overview

Definition: Clinical conditions with multiple causes that don't fit into a specific disease category and...

- Impact _____
- Lead to increased _____ and _____
- Cause decreased financial resources
- Lead to _____ hospitalizations
- Overall _____ quality of life

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| <p>5 most common syndromes:</p> <ol style="list-style-type: none"> 1. Pressure ulcers 2. Incontinence 3. Falls 4. Functional decline 5. Delirium | <p>SPICES</p> <ul style="list-style-type: none"> • Sleep disturbances • Problems eating and/or feeding • Incontinence • Confusion • Evidence of falls • Skin breakdown | <p>Additional non-specific symptoms</p> <ul style="list-style-type: none"> • Self-neglect • Apathy • Dyspnea • Fatigue |
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Geriatric Syndromes -- **Remember: older adults often under-report illnesses*

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| <p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • Age • Cognitive impairment • Functional impairment • _____ mobility | <p><i>Consequences of Not Identifying Illnesses</i></p> <ul style="list-style-type: none"> • _____ morbidity and mortality • _____ diagnosis • Unnecessary use of Emergency Department |
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Factors Contributing to Under-Reporting Illnesses

"The older the person, the more likely they are to report very good health status."

- Insidious onset and _____ symptoms
- Patients and families attribute symptoms as "normal" part of aging
- _____ seeking care until symptoms have markedly impaired function

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- Reluctance to _____ about problems – often ignored, leads to excessive tests and visits
- Communication _____ – hearing, vision, speech
- Cultural _____

Falls

- Occur in _____ of adults age 65+ and 40% of adults age 80+
- Leading cause of _____ injury and 6th leading cause of death in older adults
- 1 out of 5 falls causes _____ injury
- Lead to functional _____, hospitalization, and increased healthcare costs
- Report at hospital if a patient fell prior to arrival

Atypical Presentations of Older Adults

Factors Contributing to Atypical Presentation

- Lack of pain, _____ description and location of pain
- Pre-existing dementia
- Failure to _____ fever
- Falling
- Incontinence
- UTIs
- Underlying pathophysiology of aging

Examples of Atypical Presentation

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| <p><i>Urinary Tract Infection</i></p> <ul style="list-style-type: none"> • Incontinence • Dysuria _____ • Delirium, falls, altered mental status/confusion | <p><i>Myocardial Infarction</i></p> <ul style="list-style-type: none"> • _____ chest pain or atypical location for pain • Shortness of breath more _____ complaint than chest pain • Fatigue, weakness, syncope, falls | <p><i>Pneumonia</i></p> <ul style="list-style-type: none"> • Cough productive, dry, or absent • _____ chills or fever • Delirium • Nausea/vomiting • Tachycardia |
| <p><i>Dehydration/Hypovolemia</i></p> <ul style="list-style-type: none"> • Confusion • Falls • _____ mucous membranes | <p><i>Congestive Heart Failure</i></p> <ul style="list-style-type: none"> • Restlessness • Delirium • Falls • Anorexia • _____ fatigue | <p><i>Abdominal Conditions</i></p> <ul style="list-style-type: none"> • _____ of pain • Mild discomfort • Reports as chest pain • Constipation |

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Delirium vs. dementia

Delirium overview

- Almost 30% of hospitalized older adults experience delirium at some point
- Associated with hospital _____ rates of 22-76%
- Delirium is _____ in 66-70% of patients
- Older adults at highest risk for developing delirium due to co-morbidities, underlying brain issues, polypharmacy, etc.

Delirium/Dementia Comparison

| Characteristic | Delirium | Dementia |
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| Onset | Hours to days | Months to _____ |
| Mood | Fluctuates | Fluctuates |
| Self-Awareness | May be aware of changes in cognition | Often _____ cognitive deficits or is unaware |
| Symptom Improvement | _____ change in mental status and behavior once cause is identified and treated | No symptom _____ over time |
| Activities of Daily Living (ADLs) | May be intact or impaired | May be intact early, _____ declines |

Delirium Risk Factors & Complications

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| <p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • Stroke • Parkinson's Disease • Age • Sensory impairments • _____ medical problems and polypharmacy • History of delirium | <p><i>Complications</i></p> <ul style="list-style-type: none"> • _____ risk of falls • Weakness • _____ functioning • Decline in mobility • Combative/agitated behavior |
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Special Considerations for Older Adults

Special Considerations

- Don't rule out sexually transmitted infections
- Older adults aged 85+ have second highest rate of _____
- 1/3 of older adults develop an _____ problem – consider etoh withdrawal
- Lack of finances may lead to _____ with medications
- Impaired cognitive function may cause _____ of medications and difficulty following dietary instructions
- Decreased taste may cause misuse of medications
- Difficulty shopping and preparing food leads to malnutrition and frailty

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Geriatric Trauma

**Older adult is 5x more likely to die from trauma than younger patient with similar injury*

- Succinylcholine-induced hyperkalemia is more common in older adults
 - Consider Rocuronium as an alternative
- Polypharmacy and decreased absorption lead to increased adverse effects and risk for medication toxicity
 - Consider lower doses of etomidate, antihypertensives, sedatives
- More susceptible to shock
 - Altered mental status is an early sign of shock – can present as agitation or lethargy
 - Use smaller volumes of fluid or decrease rate when resuscitating to avoid volume overload – avoid pressure bags
- Spinal immobilization
 - C-collars often not tolerated well by older adults
 - Can cause respiratory restrictions due to osteoporosis and kyphosis

Elder Abuse

- 1 in 10 Americans aged 60+ have experienced elder abuse
- Only 1 in 14 cases are reported
- Social isolation and mental impairment (i.e. dementia) make older adults vulnerable

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| <p><i>Types of abuse</i></p> <ul style="list-style-type: none"> • Physical • Sexual • Emotional/Psychological • Neglect • Financial | <p><i>Who?</i></p> <ul style="list-style-type: none"> • Adult children #1 • Spouses • Other in-home caregivers • Healthcare professionals |
| <p><i>Why?</i></p> <ul style="list-style-type: none"> • Substance _____ • High levels of stress, ineffective coping • Lack of _____ support • High emotional or financial _____ on older adult • Lack of training in caring for older adult • Depression | <p><i>Signs of Abuse</i></p> <ul style="list-style-type: none"> • _____ sleeping • Depression • Unexplained weight loss • Signs of _____ – unexplained bruises, burns, scars, abrasions • _____, violent behavior • Withdrawn • Pressure ulcers • Dishelved _____ |

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| <p><i>What is it?</i></p> <ul style="list-style-type: none"> • “Provider Order for Life-Sustaining Treatment” • _____ document signed by provider • Denotes patient’s _____ for life-sustaining treatments • _____ an advance directive (who will make decisions) • Categories: CPR, intubation/airway, cardioversion, IV antibiotics, IV fluids, suctioning, artificial nutrition | <p><i>Who uses it?</i></p> <ul style="list-style-type: none"> • EMS – Providers recommend patients put it on refrigerator • Referenced in healthcare settings since it is entered as part of patient’s medical record similar to DNR/DNI order |
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BEERS

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| <p><i>What is it?</i></p> <ul style="list-style-type: none"> • A list of potentially _____ medications to avoid in older adults • Contains medications that are associated with _____ health outcomes and _____ events • List created by American Geriatrics Society and listed with quality and strength of evidence recommendations | <p><i>Categories:</i></p> <ul style="list-style-type: none"> • Anticholinergics • Cardiovascular • Antipsychotics • Analgesics, etc. |
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Beers – Take Away Points

- Avoid anticholinergics, antipsychotics, and benzodiazepines for _____
 - Start with lower doses of cardiac medications
 - Use diuretics with caution
 - Use anticoagulants with caution
- Start _____, Go _____!

Summary

- Older adults represent the highest percentage of healthcare consumers
- Multiple comorbid conditions and atypical presentations makes this population challenging for healthcare professionals
- Physiology of aging impacts presentation and assessment
- Remember atypical presentations, but never assume!
- SPICES: Geriatric syndromes – most common diagnoses seen in older adults
- Beers: Medications to avoid or use lower doses