MODULE #3: DELIRIUM, DEMENTIA, & DEPRESSION RELATED TO GERIATRIC FALLS

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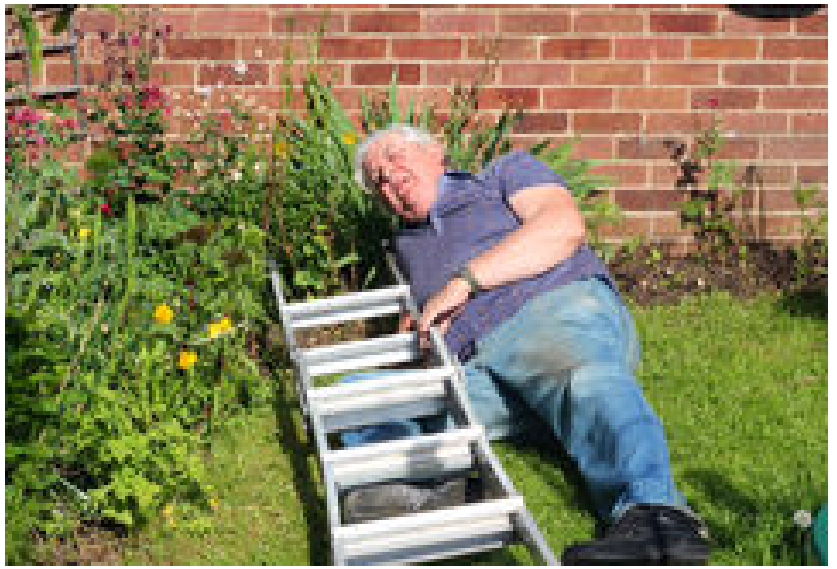
Leaning Objectives…

- State basic epidemiology of dementia
- Recognize early symptoms of dementia
- Implement basic treatment approaches for dementia, delirium, and depression



Remembering pathophysiology

- Cognition – those mental activities involved in the acquisition, processing, storing, retrieving, and application of information.
- Processes involved - awareness, remembering, reasoning, decision making, and understanding & using language.
- Cognition is function of the nervous system…so physical changes that affect this system can affect cognition.
- Depending on the cause – can be minor or major, chronic or acute, and permanent or reversible (Pearson, 2015).

Pathophysiology continued...

- Cognitive tasks occur within the cerebrum (largest upper region of the brain) (hydroassoc.org; 2016).
- Neurons – single cells that carry & process information.
- Neurotransmitters – chemical substances released from neuron and allows impulse to flow from one neuron to the next. Many cognitive disorders involve abnormalities in neurotransmitter function (Pearson, 2015).
- Cognitive deficits interfere with patient independence in everyday activities.

Why assess for cognitive impairment in geriatric patients?

- Cognitive impairment can have a number of possible causes so all must be checked and some eliminated.
- Medication side-effects, metabolic and endocrine issues.
- Delirium due to a prolonged illness or even ICU admission.
- Most elderly patients with dementia go undiagnosed. Chodosh et at. (2014) discovered that physicians were unaware of cognitive impairment in more than 40% of their cognitively impaired patients.

Definitions….

- **Psychosis – abnormal mental state. Patient has altered thoughts, feelings, perceptions, and/or including behaviors. Psychosis can include the following:**

1. **Delusions – a false belief (ex. believing the hospital staff are FBI agents).**
2. **Hallucinations – imagined sensory experiences (hearing voices, seeing animals that aren't present).**
3. **Illusions – are distorted perceptions of actual sights or sounds (example – the curtain blowing from the window might be an angel).**

Our aging population…

- In 2020, each day, 10,000 American baby-boomers will turn 65 (Quigley, 2014).
- Double aging – term used in the literature indicating that not only are seniors growing in numbers, they are also living longer.
- In the past 10 years, adults >65 have increased by 26% (nih.gov; 2016).
- Estimated that almost half of adults who are hospitalized are 65 years of age or older (ncbi.nlm.nih.gov/books; 2008).

Dementia….by the numbers….

- When older people are admitted to hospitals, “it is not unusual for these patients to present some form of cognitive decline, commonly dementia or delirium” (Nilsson, Lindkvist, Rsmussen, & Edvardsson, 2012).
- 5% of people older than 65 and 20% older than 80 years old suffer from some sort of dementia syndrome.
- Alzheimer’s disease is the most common form of dementia.
- By 2050, 15 million Americans will have dementia and currently there are 5.3 million Americans living with Alzheimer’s disease (www.nih.gov; 2016).

Epidemiology of Dementia…

- No single cause…it's a progressive, irreversible loss of cognitive function caused by several diseases or disorders (Pearson, 2015).
- Not a normal part of aging. This is often misunderstood among healthcare workers.
- Brain divided into 4 lobes.
- Damage to frontal lobe results in inhibition of information processing (linked to impulsiveness and hyperactivity).
- Parietal lobe – auditory, visual, and somatic input.

Epidemiology of Dementia…

- Temporal lobe – auditory receptive area; damage results in impaired memory for verbal material and inability to remember non-verbal materials (face recognition).
- Occipital lobe – damage results in delayed process of visual information (via optic nerves).
- Many forms of dementia: Alzheimer's disease, mild cognitive dementia, dementia with Lewy bodies, vascular dementia, and frontotemporal dementia.

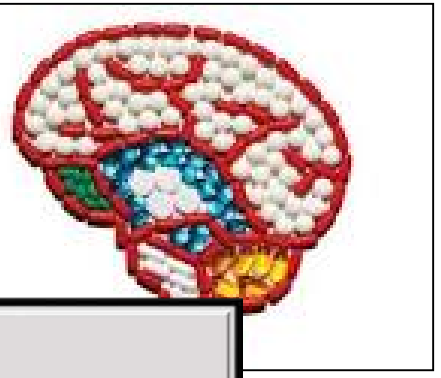
Alzheimer's Disease (AD)….

- Most common from of neurocognitive disorder – accounting for 60-80% of all dementia cases (Pearson, 2015).
- Estimated >5.4 million in US, or 1 in 8 over 65 years (Alzheimer's association 2016).
- 2 types: familial inheritance pattern, early onset (<60) also called early-onset. And sporadic (>65) – no clear pattern, called late-onset.

Characteristics of Alzheimer's Disease….

- Findings of AD relate to changes in the brains structure and function:
  - Amyloid plaques
  - Neurofibrillary tangles
  - Loss of connections between neurons
  - And neuron death
- Risk factors – genetic – overproduction of b-amyloid; environmental – DM, HTN, smoking, obesity, hypercholesterolemia, and trauma (Lewis, Dirksen, Heitkemper, & Bucher, 2014).

Mild Cognitive Impairment (MCI)….



- MCI is the second state of Alzheimer's Disease.
- Patient has issues with memory, language, or other cognitive functions and family members notice, but can still perform ADL's.
- Often undiagnosed d/t patient can still function.
- 10-20% of people >65 have MCI. Treatment: ongoing monitoring, some physicians use cholinesterase inhibitors.
- Worsening of symptoms could indicate progression to dementia (Lewis, Dirksen, Heitkemper, & Bucher, 2014).

Interventions…

- Intervention recommendations from the literature….for pts with chronic cognitive decline or dx of dementia:
- Therapeutic communication strategies.
- Strategies to reduce internal & external stressors.
- Involve family/caregiver in nursing plan of care.
- Strategies to promote patient safety.
- Monitor ADLs.
- Provide nonpharmacological intervention first, but collaborate with physician regarding pharmacological interventions (Joose, Palmer, & Lang, 2013).

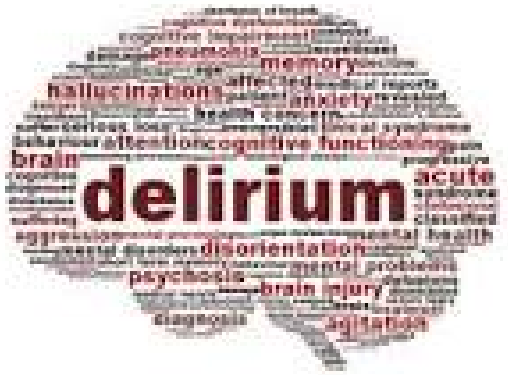
Delirium…

- Defined as a state of temporary but acute mental confusion (Lewis, Dirksen, Heitkemper, & Bucher, 2014).
- 15-53% of hospitalized adults experience delirium postoperatively.
- The disturbance develops quickly…a few hours to a few days.
- Hard to pinpoint single cause. Usually interaction of underlying medical conditions with a precipitating event (ex. sleeping medication). Pneumonia and UTI most common causes in elderly.

What can I do at the bedside....r/t delirium?

- Intervention recommendations from the literature….for pts with delirium:
- Prevention, early recognition, and tx. Care focuses on eliminating precipitating factors. Address issues r/t polypharmacy, nutritional deficits, pain, and incontinence.
- Early signs: inability to concentrate, irritability, insomnia, loss of appetite, restlessness, and confusion.
- Protect pt (restraints), decrease stimulation, family involvement, reorientation, behavioral interventions, relaxation techniques, & music therapy (Lewis, Dirksen, Heitkemper, & Bucher, 2014).

Delirium…



❖Find & Fix the Causes (Mnemonic)

D-dementia or dehydration

E-electrolytes or emotional stress

L-liver>heart>kidney>brain

I-infection or ICU

R-Rx (Meds) – most common: sedative-hypnotics, opioids,

I-injury or immobility

U-untreated pain or unfamiliar surroundings

M-metabolic disturbance

(Lewis, Dirksen, Heitkemper, & Bucher, 2014)

Depression…

- Disorder characterized by a sad or despondent mood or loss of interest in usual activities.
- Common among older adults, but not a normal part of aging.
- Signs include: social isolation, sleep disturbances, loss of appetite, memory problems, and irritability.
- Assess for suicide risk by using direct questions r/t self-harm (suicide ideation) (Pearson, 2015).

What can I do at the bedside r/t depression?

- Polypharmacy issue in geriatrics can complicate treatment of depression.
- No diagnostic tests to determine depression. Based on clinical assessment/medical hx.
- Geriatric Depression Scale useful in screening older adults for depression and determining evaluation.
- Pearson, 2015

Questions…???

- Thank you for participating….Greg.

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