DIFFERENTIATING DEMENTIA/DEPRESSION/DELIRIUM IN THE OLDER ADULT

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DISCLOSURE

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OBJECTIVES

- Differentiate between dementia, delirium and depression in older adults.
- Review current screening tools for early recognition.
- Discuss appropriate treatment options for dementia, depression, and delirium in older adults.
The 3 D’s are Dementia, Depression and Delirium which are common, chronic, and acute problems that can occur in the older adult in all health care settings. These three disorders differ in both diagnosis and management. Accurate assessment and evaluation is essential to identify treatment options for quality of life for older adults.
SIGNS OF COGNITIVE CHANGE

- Challenge to determine cause
- Incidence can increase with age
- Dementia, depression, delirium prevalent disorders
- Not normal manifestations of aging
WHY DIFFERENTIATE?

- Dementia:
  - Symptoms confused with delirium and depression

- Depression:
  - Common and frequently missed; pseudodementia

- Delirium:
  - When missed can be fatal
<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>DEMENTIA</th>
<th>DELIRIUM</th>
<th>DEPRESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
<td>Insidious, slow and often unrecognized</td>
<td>Sudden, abrupt</td>
<td>Recent, may correspond with life change</td>
</tr>
<tr>
<td>Course over 24 hours</td>
<td>Fairly stable, may see changes due to stresses</td>
<td>Fluctuating, often with nighttime exacerbations</td>
<td>Fairly stable, may be worse in the morning</td>
</tr>
<tr>
<td>Consciousness</td>
<td>Clear</td>
<td>Reduced</td>
<td>Clear</td>
</tr>
<tr>
<td>Alertness</td>
<td>Normal</td>
<td>Increased, decreased or variable</td>
<td>Normal</td>
</tr>
<tr>
<td>Psychomotor activity</td>
<td>Normal but may have apraxia</td>
<td>Increased, decreased, mixed</td>
<td>Variable, agitation or retardation</td>
</tr>
<tr>
<td>Duration</td>
<td>Months to years</td>
<td>Hours to weeks</td>
<td>Variable (at least 6 weeks) may be months to years</td>
</tr>
<tr>
<td>Attention</td>
<td>Generally normal</td>
<td>Globally disordered, fluctuates</td>
<td>Little impairment, very distractible</td>
</tr>
<tr>
<td>Orientation</td>
<td>Often impaired (answer may be close to right)</td>
<td>Usually impaired, variable, fluctuates</td>
<td>Usually normal, may answer “don’t know”</td>
</tr>
<tr>
<td>Speech</td>
<td>Difficulty word finding, preseveration</td>
<td>Often incoherent, slow or rapid</td>
<td>May be slow</td>
</tr>
<tr>
<td>Affect</td>
<td>Labile</td>
<td>Variable</td>
<td>Flat</td>
</tr>
</tbody>
</table>
Dementia

- General disorder for decline in mental ability severe enough to interfere with daily life
- Increasingly common
- Will affect tens of millions worldwide over next few decades
- NOT a normal part of aging!
Over 5 million Americans currently live with some form of dementia

Increase of more than threefold by 2050 to ~13-16 million

Worldwide as many as 100-114 million

Dementia likely to be around for a long time

Most treatments center on trying to ease decline of disease
SYMPTOMS

- Symptoms vary depending on cause & area of brain affected
- Gradual onset – cannot be dated
- Cognitive alterations: memory, attention, language, problem-solving
- Chronic illness; progressing over years
- Diagnosis based on at least 6 months of confusion
- Consciousness: alert but confused and disoriented
- Disturbed sleep-wake cycle with day-night reversal
COMMON SIGNS & SYMPTOMS

- Memory loss
- Difficulty communicating
- Inability to learn or remember new information
- Difficulty with planning and organizing
- Difficulty with coordination and motor functions
- Personality changes
- Inability to reason
- Inappropriate behavior
- Paranoia
- Agitation
- Hallucinations
Mini-Mental State Examination (MMSE)*

- Short- and long-term memory; attention span; concentration; language and communication skills; ability to plan; ability to understand instructions

**Scoring:** 28 or above normal; 20-27 mild impairment; 10-19 moderate impairment; less than 10 severe impairment

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ASSESSMENT TOOLS

Mini-Cog

- Simple, quick screening tool to identify early mental decline; consists of a three item recall and a clock drawing

Montreal Cognitive Assessment (MoCA)

- Rapid screening for mild cognitive dysfunction; attention and concentration, executive functions, memory, language, visual-constructional skills, conceptual thinking, calculations, orientation
- [http://depts.washington.edu/madclin/providers/guidelines/pdf/MoCA_Test.pdf](http://depts.washington.edu/madclin/providers/guidelines/pdf/MoCA_Test.pdf)
MORE TOOLS

- Modified Mini Mental Exam (3MS)
- The Alzheimer’s Disease Assessment Scale - Cognition (ADAS-Cog)
- General Practitioner Assessment of Cognition (GPCOG)
- Psychogeriatric Assessment Scale (PAS)
- Rowland Universal Dementia Assessment Scale (RUDAS)

**MANAGEMENT**

- **Cholinesterase Inhibitors**
  - **Aricept** (donepezil) – tablet, dispersible tablet
    - Start at 5mg QHS and increase to 10mg QHS after 4-6 weeks; may increase to 23mg after 3 months (moderate to severe stage of the disease)
  - **Exelon** (rivastigmine) – capsule, oral solution, transdermal patch
    - Start 1.5mg BID for 2 weeks and increase to 3mg BID for 2 weeks, then 4.5 mg for 2 weeks, then 6 mg BID
    - Patch only two strengths – start 4.6 mg after 4 weeks and increase to 9.5 mg
  - **Razadyne** (galantamine) – tablet, extended-release capsule, oral solution
    - Start 4mg BID 4-6 weeks, then increase to 8mg BID for 4-6 weeks, then increase to 12mg BID

- **N-methyl-D-aspartate (NMDA)–receptor antagonist**
  - Namenda used for moderate to late stage: Start at 5mg QD and increase by 5mg each week to achieve 20mg daily in a four week period
A WORD ABOUT ANTIPSYCHOTICS

- Studies show fewer than 1 in 5 people show improvement
- Virtually all positive studies sponsored by the companies making the meds
- Many flaws in published studies
- Two recent independent studies showed little to no benefit
Dementia...

...a condition in which a person’s ability to maintain her/his well-being becomes compromised.

Treat and Care with Dignity and Respect!
DEPRESSION

- Prevalent disorder, pervasive issue, under-diagnosed, under-treated

- Baby boomers: depressive disorders at higher rates than previous groups

- Tend to use health services at higher rates, engage in poorer health behaviors

- Associated with suicide – public health concern

- Older adults highest rates of suicide of any age group
PREVALENCE

- Major depression in general older population ~1% - 2%: women > men

- 17% - 37% of medical population

- Highest rate of completed suicide of any age, gender, or ethnic group – older white men

- Rate of suicide 50% higher in older adults than younger adults

- 25%-77% seriously ill older adults experience intense feelings of sadness, anxiety, depression
SYMPTOMS

- **Mood**: depressed, irritable, or anxious; crying spells; persistent for more than 14 days

- **Associated Psychological Symptoms**: ↓ gratification, interests, attachments, social withdrawal; lack of self-confidence, ↓self-esteem, poor concentration & memory, difficulty making decisions, hopeless, helpless, ↑ dependency, recurrent thoughts of death, suicidal thoughts
SYMPTOMS

- **Somatic Manifestations**: anorexia & weight loss; insomnia (early morning waking); agitation

- **Psychotic Symptoms**: delusions of worthlessness and sinfulness; ill health; poverty (evaluate as 30% of older women are at poverty level); depressive hallucinations in auditory, visual, olfactory
ASSESSMENT TOOLS

- Psychogeriatric Depression Rating Scales
  - Geriatric Depression Scale (GDS)
    - [http://www.chcr.brown.edu/GDS_SHORT_FORM.PDF](http://www.chcr.brown.edu/GDS_SHORT_FORM.PDF)
  - Cornell Depression Scale (CDS)
MANAGEMENT

- Pharmacologic:
  - Principle regarding dosing:  **Start Low - Go Slow**
  - Monitor for side effects: falls, anorexia, etc.
**ANTIDEPRESSANTS**

- **First-line therapy**: consider SSRI for most esp. with heart conduction defects or ischemic hrt. ds., prostatic hyperplasia, uncontrolled glaucoma

- **Second-line therapy**: consider venlafaxine, mirtazapine, or bupropion

- **Third-line therapy**: consider nortriptyline or desipramine with severe melancholic depression
**ANTEDEPRESSANTS TO AVOID**

- **Amitriptyline** (e.g., *Elavil*): anticholinergic, sedating, hypotensive
- **Amoxapine** (*Asendin*): anticholinergic, sedating, hypotensive; also associated with EPS, tardive dyskinesia, and neuroleptic malignant syndrome
- **Doxepin** (eg, *Sinequan*): anticholinergic, sedating, hypotensive
- **Imipramine** (*Tofranil*): anticholinergic, sedating, hypotensive
- **Maprotiline** (*Ludiomil*): seizures, rashes
- **Protriptyline** (*Vivactil*): very anticholinergic; can be stimulating
- **St. John's Wort**: decreases effects of digoxin and CYP3A4 substrates; efficacy questioned
- **Trimipramine** (*Surmontil*): anticholinergic, sedating, hypotensive
PSYCHOTHERAPY

- In combination with pharmacotherapy
  - Cognitive behavioral therapy
  - Interpersonal therapy
  - Problem solving therapy
ELECTROCONVULSIVE THERAPY

- Treatment of choice for severe depression
- Improvement rate who do not respond to antidepressant meds = 80%
Untreated depression, like delirium, is neurotoxic and can lead to, or worsen dementia!
DELIRIUM

- Acute confusional state
- Under-recognized disorder & underdiagnosed!
- Reversible
- Hallmark of delirium: presence of underlying medical disorder = need to discover cause
RISK FACTORS

- Age greater than 80 years of age
- Fever
- Preexisting dementia
- Traumatic injury, including fractures
- Unstable/poorly managed diseases
- Symptomatic infections
- Addition of three or more medications – drug toxicity or withdrawal
- Social isolation
- Use of neuroleptics and narcotics
- Use of restraints
- Bladder catheters
- Protein Malnutrition
PREVALENCE

- Present in 10-30% of hospitalized older adults
- 10-50% during surgical hospitalizations
- **Most at risk:** older adults with dementia; advanced age; comorbid physical issues; immobility; sleep deprivation; dehydration; pain; sensory impairment
DELIRIUM

• Hyperactive (*most recognized*)
  – ↑ psychomotor activity (agitation, mood labiality, refusal to cooperate, disruptive behaviors, combativeness)

• Hypoactive (*under recognized*)
  – ↓ psychomotor activity (sluggish, lethargic, withdrawn, apathy)

• Mixed (*highest risk for morbidity/mortality*)
  – Fluctuating course
SYMPTOMS

• **Disturbance of consciousness** (reduced clarity of awareness of environment) with reduced ability to focus, sustain, or shift attention

• **Change in cognition** (memory deficit, disorientation, language disturbance) or development of perceptual disturbance not better accounted for by preexisting, established, or evolving dementia

• **Disturbance develops over short period and fluctuates during course of day**

• **Evidence from history**, PE, or laboratory findings indicates cause by direct physiologic consequences of general medical condition.
It is a **clinical diagnosis**!

Comprehensive history & physical examination, with careful neurologic exam – cornerstone of evaluation

Review medication list

**Laboratory evaluation:** CBC, electrolytes, BUN, creatinine, glucose, calcium, phosphate, liver enzymes, oxygen saturation; Other labs to consider: magnesium, thyroid function, B12 level, drug levels, toxicology screen, ammonia level, arterial blood gases

**EKG**

**Search** for occult **infection:** urinalysis, chest x-ray, selected cultures as indicated
ASSESSMENT

- Digit Span Test (measures retention or immediate memory)
- Days of the week backward
- Confusion Assessment Method (CAM)
The Confusion Assessment Method (CAM)

- Part 1: Screens for overall cognitive impairment
- Part 2: 4 features to distinguish delirium or reversible confusion from other types of cognitive impairment

Administered in less than 5 minutes - closely correlates with DSM-IV criteria for delirium.

- [http://www.healthcare.uiowa.edu/igec/tools/cognitive/CAM.pdf](http://www.healthcare.uiowa.edu/igec/tools/cognitive/CAM.pdf)
DELIRIUM: MNEMONIC

- **D** – Drugs, drugs, drugs
- **E** – Eyes (vision), ears (hearing)
- **L** – Low oxygen states (MI, ARDS, CFH, COPD, PE, CVA)
- **I** – Infection
- **R** – Retention of urine or stool
- **I** – Ictal (refers to a physiologic state or event such as a seizure, stroke, headache)
- **U** – Underhydration/Undernutrition (anemia)
- **M** – Metabolic
- **(S)** – Subdural hematoma/sleep deprivation

* Poor vision and hearing are considered more risk factors than true causes, but should be "fixed" or improved if possible. Cerumen is common cause of hearing impairment.
**MANAGEMENT**

- Identification and treatment of etiology of delirium
- Environmental modification
- Control of symptoms
- Pharmacologic treatment
  - No blinded randomized controlled trials
  - Haldol most studied
  - Starting dose 0.5mg; max 3-5mg/24 hr (start low, go slow)
  - Sedates, treats hallucinations, paranoia, delusions, less hypotensive & anticholinergic
- May take days, weeks, months to clear
NONPHARMACOLOGICAL MANAGEMENT

- Provide general supportive measures:
  + Avoid restraints – will cause more problems than help
  + Encourage familiar faces for reassurance e.g. family members
  + Fluids, nutrition
  + Toileting
  + Low stimulation – avoid/decrease excessive noise
  + Provide orientation (calendar, clock)
  + Correct sensory impairment e.g. glasses, hearing aids
Delirium: occurring across health care settings associated with adverse outcomes, including death –

Treat the patient, not the X-ray.

~James M. Hunter
REFERENCES

- http://www.nynj.va.gov/docs/Module08.pdf


thank you