THE 3 D’S OF GERIATRIC PSYCHIATRY:
DEPRESSION
DEMENTIA &
DELIRIUM

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OBJECTIVES

- Differentiate between depression, dementia, and delirium
- Develop an approach to diagnosing the 3 D’s
- List appropriate medical tests that should be performed as part of a diagnostic assessment
- Understand etiology and epidemiology of the 3 D’s
- Be aware of pharmacological and non-pharmacological management strategies of the 3 D’s
CASE

• 83 year old female in a long term care setting. Appears confused. Has been crying and trying to leave the facility. Has been needing more help to manage personal care, but sometimes refuses it. Please assist with diagnosis and management.
Differential Diagnosis

- Depression
  - “crying”

- Dementia
  - “confused”
  - “needs more help”

- Delirium
  - “confused”
  - “needs more help”
PART I: DEPRESSION
Aging and Depression

- Elderly people face challenges unique to their population
- In spite of these challenges, depression is not a normal response to the aging process.
- Certain symptoms are used to diagnose depression.
Symptoms of Depression

SIGECAMPS

S - Sleep disturbance
I - Loss of Interest or pleasure in usual activities
G - Excessive feelings of Guilt, or worthlessness
E - Decreased Energy and increased fatigue
C - Diminished ability to think or Concentrate
A - Appetite change with weight loss/gain
M - Mood is low most days
P - Psychomotor agitation or retardation
S - Suicidal ideation
Assessment Approach

1. Assess SIGECAMPS
2. Assess severity of symptoms
3. Assess suicide risk
4. Assess level disability
5. Rule out medical causes
6. Obtain collateral information
Assessment Approach

Also inquire about:
1. Past psychiatric history
2. Past medical history
3. Medications and substances
4. Family history
5. Personal history
Medical Investigations

1. CBC
2. Electrolytes
3. BUN/creatinine
4. Liver functions
5. Glucose
6. TSH
7. B12/Folate
8. Urinalysis
Depression in the Elderly

• Depression can present differently
  – “Depressed mood” may be less prominent
  – Anxiety is more prominent
  – Somatic (physical) complaints are common
  – Cognitive impairment is more common
  – Psychosis is more common
A Hidden Illness

Depression is under-reported

- Masked by dementia
- Masked by co-morbid illness
- Stigma of aging
- Cohort effect
Risk Factors

- Female gender
- Single/widowed
- Recent loss of spouse
- Stressful life events
- Social isolation and loneliness
- Diagnosis of dementia
- Major physical illness
- Chronic sleep problems or anxiety
Epidemiology

Prevalence in those >65:

- ♀ > ♂
- 1-4% Major Depression
- 15% with partial symptoms
- >20% in hospital settings
- Up to 40% in long term care settings
Suicide

Suicide is not uncommon

• Older men are at high risk
  – 5x greater in white men >65
• 60% of completers are men
• 75% of attempters are women
Suicide Risk Factors

- Old age
- Male gender
- Caucasian
- Widowed/ Divorced
- Previous attempts
- Losses
- Personality factors
- Medical illness
- Substance use
- Hopelessness/loneliness
Screening for Suicide

Assess for:

• Presence of suicidal ideation
• Presence of suicidal intent
• Presence of a suicide plan
• Review current or past suicidal behaviour
Similar Conditions

• Bereavement
  – Reaction to the death/loss of a loved one
  – May present with symptoms characteristic of major depression
  – Typically seen as “normal”

• Abnormal when:
  – It is prolonged
  – Symptoms are severe
Treatment of Depression

Treatment options are numerous:

- Medication
- ECT
- Psychotherapy
- Combination
ECT

Reasons to choose ECT:

• Elderly are sensitive to side effects
• Depression with psychosis
• Vulnerable to physical complications
  – Dehydration
  – Malnutrition
  – DVT’s from sustained inactivity

• ECT WORKS FAST!
Antidepressants

There are several classes of antidepressants:

- Tricyclics (TCA’s)
- SSRI’s
- MAOI’s (rarely used)
- “Others”
Choosing an Antidepressant

When choosing an antidepressant consider:

1) Previous response to treatment
2) Type of depression
3) Side effect profile
4) Co-morbid medical conditions
5) Interactions with other medications
6) Potential for lethality of overdose
Side Effects in the Elderly

- Drug – drug interactions are common
- Side effects are likely to occur
- Side effects have serious consequences
- Hip fractures are more frequent
Certain TCA’s are safer in the elderly:
• Nortriptyline (least orthostatic hypotension)
• Desipramine (least anticholinergic)

Side effects of TCA’s are common:
• Anticholinergic side effects
• Orthostatic hypotension
• Sedation
• Cardiotoxicity
SSRI’s include:

- Paroxetine (Paxil)  
  - 20-40 mg
- Sertraline (Zoloft)  
  - 100-200 mg
- Citalopram (Celexa)  
  - 20-40 mg
- Escitalopram (Cipralex)  
  - 10-20 mg
- Fluvoxamine (Luvox)  
  - 100-200 mg
- Fluoxetine (Prozac)  
  - 20-40 mg
SSRI Side Effects (HAANDSS)

- Headache
- Agitation
- Anorexia
- Nausea
- Diarrhea
- Sexual dysfunction
- Sleep loss (Insomnia)
- Hyponatremia (SIADH)*)
Other Antidepressants

• Venlafaxine (Effexor)
  – 75-225 mg
  – Can cause HTN

• Bupropion SR (Wellbutrin)
  – 100 mg BID
  – Can worsen anxiety

• Mirtazapine (Remeron)
  – 30-45 mg
  – Can cause sedation/weight gain
“START LOW, GO SLOW”

• Start at half the dose of younger people
• Aim to reach an average dose at one month
What if there is no remission of depression symptoms?

- Optimize dose
- Augment with an “add-on” medication
- Switch to a different antidepressant
Psychotherapy

- Cognitive Behaviour Therapy (CBT)
- Interpersonal Therapy (IPT)
- Supportive therapy
  - Instillation of hope
Treatment Guidelines:

- After 1\textsuperscript{st} episode treat for at least 1-2 years
- Monitor for recurrence
- Treat certain patients indefinitely:
  - Multiple episodes
  - Severe or difficult to treat depression
References

PART II: DEMENTIA
Normal Aging

• It is commonly believed that it is normal to lose one’s memory and functional abilities, but dementia is not an inevitable process
• **Average** decrement can be expected with all physical/cognitive abilities
WHAT IS DEMENTIA?

• Dementia is a combination of:
  – Cognitive decline
  – Functional decline

• Dementia should not be diagnosed during a period of delirium
DSM-IV Diagnosis (Alzheimer’s)

- Memory loss, and one (or more) of:
  1) Aphasia
  2) Apraxia
  3) Agnosia
  4) Executive dysfunction
- Functional impairment
- Gradual onset and continuing decline
- Not due to other medical condition
- Not due to delirium or other Axis I
Memory Loss

- Impaired ability to learn new information or recall previously learned information
- Short-term recall most affected in Alzheimer’s dementia
Aphasia

- Aphasia is language disturbance
- Two types:
  1) Expressive (non-fluent)
  2) Receptive (fluent)
- Both types can be present at the same time, especially as dementia progresses
**Apraxia**

- Apraxia is impairment in ability to carry out motor activities despite intact motor function
  - For example:
    - Being unable to use a comb
    - Being unable to manipulate eating utensils
Agnosia

Agnosia is impairment in:

- Ability to recognize or identify objects despite intact sensory function
- Examples:
  1) Visual
  2) Tactile
Executive Dysfunction

- Executive dysfunction is a deficit in higher-order decision making and planning
- Examples:
  - S- sequencing
  - O- ordering
  - A- abstract thinking
  - P- planning
- Individuals have difficulty carrying out complex, multi-step tasks such as driving a car
HOW DO YOU ASSESS FUNCTIONAL IMPAIRMENT?

- Instrumental activities of daily living (IADL’s)
- Activities of daily living (ADL’s)
IADL’s

- Working
- Shopping
- Cooking
- Finances
- Dispensing medications
- Driving
- Maintaining home

ALL OF THESE TASKS REQUIRE MULTIPLE STEPS TO CARRY OUT
**ADL’s**

- Dressing
- Bathing
- Toileting
- Eating
- Ambulation

**THESE ARE SIMPLER TASKS THAT REQUIRE LESS PLANNING**
Cognitive Assessment

Many areas of cognition can be tested:

- Attention and concentration
- Language
- Orientation
- Memory
- Visuospatial function
- Praxis
- Executive function
Cognitive Testing

1) MMSE
2) Executive function tests
   • Clock drawing
   • Trails B test
Assessment Approach

- Inquire about **cognitive changes**
- Inquire about **functional decline**
- Obtain **collateral information**
- Perform **cognitive testing**
- Physical examination
  - Look for **focal neurologic signs**
- Medical investigations
  - Look for **reversible causes**
Assessment Approach

As part of a comprehensive assessment, you should inquire about:

1. Past psychiatric history
2. Past medical history
3. Medications and substances
4. Family history
5. Personal history
Medical Investigations

- Usual tests **PLUS:**
- TSH
- B12, folate
- Ca/ Mg
- Urinalysis
- Imaging: CT/MRI
Types of Dementia

1) Alzheimer’s Disease (AD)
2) Vascular/Mixed AD
3) Lewy Body Disease Dementia
4) Frontotemporal
Alzheimer’s Disease

• Most common dementia
• Prevalence doubles every five years after age 60
• Typical pattern
  – Early memory loss
  – Gradual functional impairment
• Neuropsychiatric symptoms common
Risk Factors

• Age
• Female gender
• Head injury
• Down’s Syndrome
• Vascular risk factors
  – HTN, DM, smoking, obesity
• HIGH EDUCATION IS PROTECTIVE
Prognosis

• Average survival is 8 years
  – Range of 1 to 20 years
• Certain symptoms can be expected with certain stages
  – Behavioural problems usually don’t occur until the moderate to severe stages
Vascular Dementia

• Likely 2nd most common dementia
  – Most patients have **mixed** AD pathology
• Clinical presentation is variable
  – Depends on where the stroke(s) is
  – **Early** functional impairment
  – **Early** mobility problems and incontinence
  – **Variable** memory loss
  – **Variable** rate of decline
Dementia with Lewy Bodies

• Core features:
  – Fluctuating cognition
  – Visual hallucinations
  – Parkinsonism

• Memory impairment is not always the presenting feature

• Worse prognosis than AD
Frontotemporal Dementia

- Clinical features:
  - **Early** age of onset
  - **Early** personality changes
    - Social inappropriateness
  - **Early** problems with executive functions
  - **Later** memory problems
Stages of Dementia

3 stages, each associated with cognitive, functional, and behavioural changes:

1. Mild
2. Moderate
3. Severe
Treatment

Cholinesterase inhibitors

- **Donepezil (Aricept®)**
  - Up to 10 mg OD

- **Rivastigmine (Exelon®)**
  - Up to 6 mg BID
  - Also comes in transdermal patch

- **Galantamine (Reminyl®)**
  - Up to 12 mg BID
  - Also comes in extended release form
Cholinesterase Inhibitors

• Slow progression of cognitive decline
• Help to preserve functional abilities
• Can help manage adverse behaviours
• May prolong independence
Common Dementia Behaviours

- Behavioural
  - Agitation
  - Aggression
  - Screaming
  - Cursing*
  - Frequent repetition*
  - Wandering*
  - Sexual disinhibition
  - Hoarding*
  - Urination/defecation*

- Psychological
  - Personality change
  - Anxiety
  - Depression
  - Pathological crying
  - Hallucinations
  - Delusions
  - Apathy*

*not responsive to medication
Assessment of Behaviours

• Assess the ABC’s
  – Antecedent
  – Behaviour
  – Consequences

• Changes in environment
• Changes in medication
• Underlying medical condition
• Caregiver attitude
HOW DO YOU TREAT THESE SYMPTOMS?

• Two approaches:
  – Non-pharmacological interventions
  – Pharmacological interventions
Non-pharmacological Management

- Reasonable expectations/goals
- Communication
- Consistency and structure
- Education of caregivers
Pharmacological Management

COMMONLY USED MEDICATIONS INCLUDE:

• Antipsychotics
• Antidepressants
• Mood stabilizers
• Cholinesterase inhibitors
• Other drugs
References

PART III: DELIRIUM
DSM-IV Diagnosis

1. Disturbance of consciousness
2. Change in cognition or development of a perceptual disturbance
3. Acute onset with fluctuation
Delirium Symptoms

- Acute onset
  - Usually develops over hours to days
- Prodromal phase
  - Initial symptoms can be mild/transient if onset is more gradual
Delirium Symptoms

- Fluctuation
  - Unpredictable
  - Often worse at night
  - Periods of lucidity

- Psychomotor disturbance
Delirium Symptoms

- Disturbance of consciousness
  - Spectrum
- Inattention
  - Easily distractible
  - May account for all other cognitive deficits
**Delirium Symptoms**

- Disruption of sleep and wakefulness
  - Vivid dreams and nightmares
- Emotional disturbance
  - Fear
  - Anxiety
  - Depression
Delirium Symptoms

• Disorders of thought
  – Abnormalities in form and content of thinking are prominent
  – Content may be psychotic
Delirium Symptoms

• Disorders of language
• Disorders of memory and orientation
  – Impaired memory
  – Disorientation to time, place, and (sometimes) person
Delirium Symptoms

• Perceptual disturbances
  – Hallucinations
    • May respond as if they are real
    • Visual (most common)
    • Auditory
    • Tactile (less common)
Delirium Subtypes

1. Hyperactive
2. Hypoactive
3. Mixed
Assessment Approach

- Cognitive assessment
  - MMSE
  - Digit span forwards/backwards
  - Recite days of the week or months of the year
- Medical investigations
- Collateral information
- Physical examination
Assessment Approach

As part of a comprehensive assessment, you should inquire about:

1. Past psychiatric history
2. Past medical history
3. Current medications
4. Family history
5. Personal history
6. Pre-morbid cognitive and functional status
Medical Investigations

- CBC
- Electroytes
- BUN/creatinine
- Magnesium and phosphate
- Calcium and albumin
- Liver function tests
- TSH
- **Urinalysis**
- Blood gases
- Blood culture
- Chest x-ray
- ECG
DELIRIUM IS A COMMON DISORDER

• It occurs in up to 50% of older persons admitted to acute care settings
Epidemiology

• Admission to medical unit:
  – 10-20% prevalence at time of admission
  – 5-10% incidence during hospitalization

• Special populations
  – Older patients presenting to ER: up to 30%
  – Long-term care home residents: 6-14%
  – General surgical patients: 10-15%
  – Cardiac surgery patients: 30%
  – Hip fractures: 50%
  – Age >65 admitted to ICU: 70%
  – Palliative advanced cancer patients: 88%
Delirium is OFTEN UNRECOGNIZED!!

- Many cases undiagnosed
- Misdiagnosed as depression
Risk Factors

- **Advanced age**
- Male sex
- History of delirium
- **Dementia**
- Functional impairment
- Depression
- Sensory impairment
- **Medication use**
  - Narcotics
  - Psychotropics
- Polypharmacy
- **Alcohol abuse**

- Severe medical illness
- **Multiple co-morbidities**
- Renal/hepatic impairment
- History of stroke
- Fever
- Hypotension
- Electrolyte abnormalities
- Dehydration
- Fracture on admission
- Surgery
Causes

- **Drug-induced**
- **Alcohol and drug withdrawal**
- **Surgical procedures**
- **Infection**
  - Pneumonia
  - Urinary tract infection
- **Fluid-electrolyte disturbance**
  - Dehydration
- **Severe pain**

- **Metabolic endocrine**
- **Cardiopulmonary hypoperfusion and hypoxia**
- **Intracranial**
  - Stroke
  - Head injury
- **Sensory/environmental**
  - Sensory impairment
  - Acute care settings
High Risk Medications

- **Sedative/hypnotics**
- **Anticholinergic drugs**
  - Oxybutynin
  - Tricyclic antidepressants
  - Antipsychotics
  - Warfarin
  - Furosemide (Lasix)
  - Cumulative effect of multiple drugs
- **Narcotics/opioids**
DELIRIUM OFTEN HAS A MULTIFACTORIAL ETIOLOGY

REMEMBER

NOT FINDING A SPECIFIC CAUSE DOES NOT INDICATE THAT A DELIRIUM IS NOT PRESENT - MANY CASES HAVE NO DEFINITE FOUND CAUSE
DELIRIUM IS A MEDICAL EMERGENCY!
TREAT ALL POTENTIALLY CORRECTABLE CONTRIBUTING CAUSES OF DELIRIUM
THERE ARE TWO BASIC APPROACHES TO MANAGEMENT:

• NON-PHARMACOLOGICAL
• PHARMACOLOGICAL
Non-pharmacological

• Assess safety
  – Try to avoid physical restraints
• Establish physiological stability
• Address modifiable risk factors
  – Correct sensory deficits
  – Manage pain
  – Support normal sleep pattern
Non-pharmacological

• Optimize communication
• Optimize environment
  – Avoid sensory deprivation and overload
  – Minimize noise
  – Provide appropriate lighting
  – Provide familiar objects
Pharmacological

MEDICATIONS FREQUENTLY USED IN MANAGING THE SYMPTOMS OF DELIRIUM:

• Antipsychotics
  – Typical and atypical
• Benzodiazepines
• Others
Haloperidol

- RCT evidence for haloperidol
  - Preferred over low-potency antipsychotics
    - Less anticholinergic
    - Less sedating
    - Range of doses/formulations available

START LOW
For example 0.25-0.5 mg od-bid
Atypical Antipsychotics

• Dosing:
  – Risperidone
    • 0.25 mg od-bid
  – Olanzapine
    • 1.25-2.5 mg/day
  – Quetiapine
    • 12.5-50 mg/day

• Preferred if patient has:
  – Parkinson’s Disease
  – Lewy Body Dementia
References

## Conclusion: Differentiating the 3 D’s

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<thead>
<tr>
<th></th>
<th>Delirium</th>
<th>Dementia</th>
<th>Depression</th>
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<tbody>
<tr>
<td><strong>Onset</strong></td>
<td>Acute</td>
<td>Insidious</td>
<td>Variable</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Days to weeks</td>
<td>Months to years</td>
<td>Variable</td>
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<tr>
<td><strong>Course</strong></td>
<td>Fluctuating</td>
<td>Slowly progressive</td>
<td>Diurnal variation</td>
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<tr>
<td><strong>Consciousness</strong></td>
<td>Impaired, fluctuates</td>
<td>Clear until late in the course of illness</td>
<td>Unimpaired</td>
</tr>
<tr>
<td><strong>Attention &amp; Memory</strong></td>
<td>Inattentive; poor memory</td>
<td>Poor memory without marked inattention</td>
<td>Difficulty concentrating; memory intact/minimally impaired</td>
</tr>
<tr>
<td><strong>Affect</strong></td>
<td>Variable</td>
<td>Variable</td>
<td>Depressed; loss of interest and pleasure in usual activities</td>
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QUESTIONS?