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 - **S**leep disturbance

I - Loss of **I**nterest or pleasure in usual activities

G - Excessive feelings of **G**uilt, or worthlessness

E - Decreased **E**nergy and increased fatigue

C - Diminished ability to think or **C**oncentrate

A - **A**ppetite change with weight loss/gain

M - **M**ood is low most days

P - **P**sychomotor agitation or retardation

S - **S**uicidal 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

TCA's

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

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)

- **H**eadache
- **A**gitation
- **A**norexia
- **N**ausea
- **D**iarrhea
- **S**exual dysfunction
- **S**leep 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

Starting an Antidepressant

"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 1st episode treat for at least **1-2 years**
- Monitor for recurrence
- Treat certain patients indefinitely:
  - Multiple episodes
  - Severe or difficult to treat depression

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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 is 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

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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

TREAT ALL POTENTIALLY CORRECTABLE CONTRIBUTING CAUSES OF DELIRIUM

Treatment Approaches

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

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Conclusion: Differentiating the 3 D's

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

QUESTIONS?