Dementia, Depression, Delirium (The 3D's), FALLS & AGEM

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1st D – Dementia
What is Dementia?

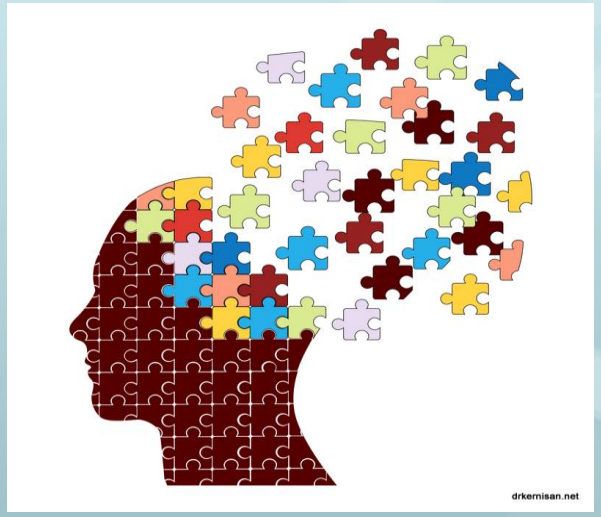
- An umbrella term used to describe a set of symptoms which can affect a persons memory, thinking, behaviour, judgement, language, communication, problem solving, emotions & ability to perform tasks.

Dementia types – Most common

- Alzheimer's Dementia
- Vascular Dementia
- Lewy Body Dementia
- Parkinsons' Dementia
- Fronto temporal dementia
- ETOH dementia
- Mixed dementia

Dementia characteristics

- Memory impairment
- Language difficulties
- Sleep disturbances
- Hallucinations
- Gait imbalances *
- Impaired judgment
- Swallowing difficulties
- Apathy
- Depression
- Anger
- Wandering
- **Characteristics can depends on type of dementia & stage of dementia**



Stages of Dementia

- **Early Dementia** = increased apathy, loss of interests, difficulty with complex tasks (eg: money handling), memory impairment

- **Moderate Dementia** = worsened symptoms, difficulty with self care, symptoms of BPSD (Behavioural & psychological symptoms of dementia)

- **Severe Dementia** = Dependence with all basic cares, difficulty walking & talking, incontinence, increased night time disturbances, agitation & aggression (RACF)

- Falls can occur in all these stages
- Increased risk of falls as disease progresses

Dementia stats

- 1700 new cases diagnosed per week in Australia
- Current Australian figures > 354,000
- 25,000 people in Australia with dementia < 65
- At age 65: 1 in 12 people have dementia
- At age 80: 1 in 4 people have dementia
- Port Macquarie state electorate has 3rd highest dementia rates in NSW

Management of dementia

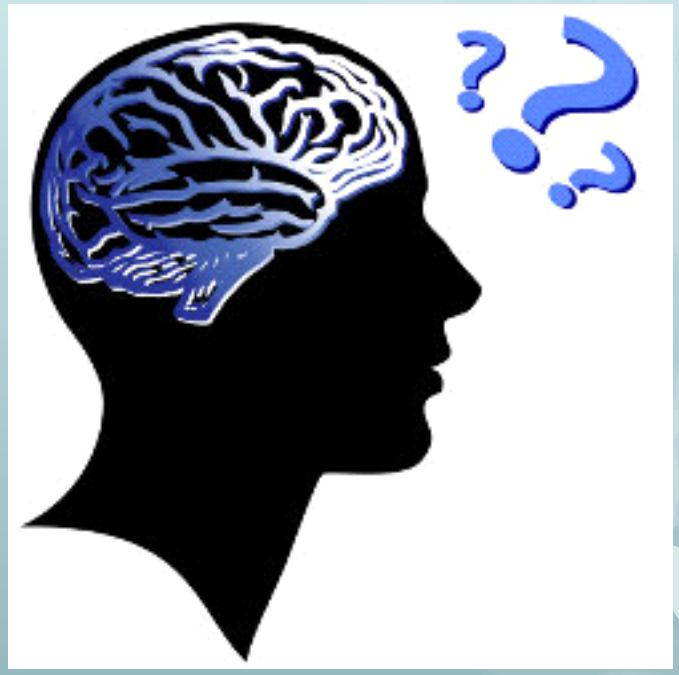
- No cure
- Depends on type of dementia & BPSD
- Pharmacological management = Cholinesterase inhibitors can be used with A.D & LBD
- Cholinesterase inhibitors eg: Donepezil can increase neurotransmitter acetycholine which is responsible for function & cognition
- Cholinesterase inhibitors temporary improve or stabilise dementia symptoms – variable responses in individuals
- PCC principles recommended eg: TOP 5
- Diversional therapies

2nd D -Depression

- Common in elderly
- Life changes can increase risk of depression in elderly
- Health problems, disabilities, pain, cognitive decline & some medications can all contribute
- Close link between depression & anxiety in elderly
- Difficult at times to diagnose due to multiple other co-existing conditions & grief/loss

Depression symptoms

- Insomnia or hypersomnia
- Withdrawing
- Inability to find pleasure in activities
- Poor appetite
- Weight loss/gain
- Nutritional deficiencies
- Digestive upsets
- Impaired attention & memory
- Impaired executive function
- Reduced processing speed/slowing down
- Restlessness
- Neglect of self
- Reduced motivation
- Indecisiveness
- Reduced self esteem
- Worthlessness/Hopelessness
- Financial stress
- Irritability/Agitation
- Guilt
- Psychotic features
- Suicidal ideations



Treatment for Depression

- Antidepressants are commonly prescribed (side effects)
- Antidepressants have been associated with increased falls
- Psychotherapy must be considered
- In severe depression which does not respond to antidepressants, ECT is considered

3rd D –Delirium
What is Delirium?

- Delirium is a common serious medical condition
- Onset is sudden and can last for hours or days
- Fluctuates, becoming worse as day progresses
- Often mistaken for dementia (under recognized)
- Common in pre-existing cognitive impairment
- Affects sleep, mood & thoughts
- Usually has an underlying organic cause

Risk Factors

- Age (over 65years old) – Elderly at risk due to pre-existing age related cerebral changes
- Dementia/cognitive impairment
- Multiple medications
- Sensory impairment (visual/hearing)
- Dehydration/Malnutrition
- Chronic physical illness & previous Stroke
- Substance use (including alcohol)
- Neurological impairment
- Depression
- Functional disability

Precipitating Factors Most common

- Medications
- Surgery
- Anesthesia
- Pain
- Anemia
- Infections
- Acute illness
- Usually multifactorial

Types of Delirium

- Hyperactive delirium =severe confusion and disorientation with relatively rapid onset and fluctuating intensity (25%)
- Hypoactive delirium = sudden withdrawal from the outside world. These patients are at greater risk due to possible drowsiness and appearing settled (poor prognosis)
- Mixed delirium = Patients present with a combination of hypo and hyper delirium symptoms.
- Majority of patients who are delirious present with mixed type

Delirium stats

- 10 -31% of elderly admitted with delirium
- Mortality rate for those admitted with a delirium can be up to 26%
- Up to a further 56 % will develop delirium during their admission
- Mortality rate for those who develop delirium during admission, up to 76%
- Following general surgery delirium rates are 5-10 %
- Following orthopedic or cardiac surgery, rates can be 30 – 42%
- Rates of delirium in ICU & palliative care can be up to 80%
- 32-66% delirium unrecognized

Delirium complications

- Most common complication in hospitals
- Leads to poor patient outcomes
- Can lead to increased RACF placement
- Increased length of stay
- It Is REVERSIBLE
- Must be managed in timely manner
- **Approx 45% of patients with delirium are DC prior to resolving**

“Delirium Clinical Care Standard”

- In 2016, the Australian Commission on Safety & Quality in Healthcare launched the “Delirium Clinical Care Standard”
- This standard is aimed at ensuring patients with a delirium receive optimal treatment to reduce duration & severity of delirium. It also aims to ensure patients at risk are identified promptly & receive preventative strategies
- The Delirium Standard focuses on 7 key principles

Delirium Standard
7 Key Principles

- **1. Ensuring Early Screening** (Timely Identification of delirium & early identification of those who are "At Risk") - DRAT
- **2. Assessing for Delirium** (To improve early diagnosis & CAM recommended)
- **3. Interventions to Prevent Delirium** (Eg: Environment, Orientation, Sensory aids, Nutrition/Hydration, O2, medication review, management of pain & bowels & removal of lines/IDC asap)
- **4. Identifying & Treating Underlying Cause** (To ensure treatment is received in a timely manner)
- **5. Preventing Falls & Pressure Areas** (To reduce hospital acquired complications)
- **6. Minimizing use of antipsychotics** (Non –pharmacological approaches in first instance recommended unless patient is at risk of harm to self or others)
- **7. Transition from Hospital Care** (Informing GP & other care providers regarding ongoing care requirements)

Falls

- Elderly - Those over age of 65 fall each year in community
- Multifactorial
- Frail and institutionalised experience higher rates of falls
- Delirium
- Toileting
- Postural hypotension
- Polypharmacy
- All medications that act on CNS
- Evidence indicates sedatives are associated with falls

Falls complications

- #NOF or other fractures
- Delirium
- Functional decline
- Loss of confidence
- Reduced mobility occurs from reduced confidence/fear
- Annual incidence in cognitive impairment is 60-80%
- Falls in cognitive impairment has 5 times greater risk of institutionalization
- Falls in cognitively impaired leads to carer burden
- Falls increase costs to healthcare system
- Those with cognitive impairment who fall have higher risk of major fall related injuries such as fractures & head injuries leading to increased mortality

What is the link between Falls & the 3D's

- Neurotransmitter deficits in the 3D's (dopamine & acetycholine)
- Dopamine responsible for regulating movement & emotion
- Acetylcholine responsible for gait & cognition
- There is reduction of executive function in 3D's (Impulsivity!)
- Executive function includes decision making, reasoning, problem solving, initiating & maintaining tasks, flexibility to adapt to change, attention & memory
- Mobility decline & slowing of gait co-exists with & can precede cognitive decline
- Depression is associated with fear of falling
- Depression & fear of falling are associated with impaired gait & balance
- Extensive research into falls found multifactorial interventions are required
- Managing falls in cognitive decline is difficult

Strategies to reduce falls in 3D's

- Medication reviews
- Strength & balance training
- Exercise
- Sensory aid correction
- Environmental modifications
- Adequate footwear
- Use of mobility aids
- Education
- Cognitive behavior therapy for those fearful of falling

AGEM - PMBH

- Acute Geriatric Evaluation & Management
- Secure 12 bedded purpose built unit
- MDT intervention
- 3 models of care
- GEM model = slow stream rehab
- Acute Delirium model = suitable environment to manage delirium once initial acute investigations completed. Reduces complications associated with delirium.
- Psychogeriatric = BPSD & Depression in elderly
- All models aim to prevent & enhance functional/cognitive decline, with a goal of DC back to usual accommodation
- Patients usually have at least 1 of 3D's

AGEM

- Model of care & environment in AGEM can assist in 3D's management
- Quieter environment
- Adequate lighting
- Outdoor area
- Lounge area
- Falls Mats
- Orientation clocks/Boards
- Diversional therapy/activities
- Signage
- Contrasting colours
- Promote minimal use of pharmacological interventions
- Promotes PCC principles

AGEM falls stats

- Jan 2017- June 2017 137 falls at PMBH
- 24/137 in AGEM (18%)
- Falls still occur
- Difficult prevent all falls
- All complex high falls risk patients
- AGEM model promotes mobility which can contribute to falls
- Unclear actual no. of falls potentially prevented
- Reduction in number of specials at PMBH since AGEM opened

RCA Incident- Poor outcome

- 96 yr old admitted to ED following been found in a confused state at home
- Usually living independantly
- Basic investigations completed
- Dx cellulitis – treated for same
- Unresolved delirium for 2 weeks
- Further Ax found other likely contributing factors were pain, dehydration, UTI, constipation, ?urinary retention, & Norspan patch
- Minimal management of these contributing factors
- Below baseline mobility
- Focus on RACF (Pt was refusing RACF)
- Not safe for DC home due to mobility, transferred to subacute hospital
- Remained delirious at subacute hospital, 3 days post admission found on floor
- Sustained haematoma to scalp & #L) clavicle & #L) NOF
- Discussions with family, palliative decision made
- Died 4 days post fall
- **Could we have improved outcomes for this lady?**

Take home message!!

- Importance of thorough Assessment & Management in 3D's
- Important to implement 7 principles from the Delirium Clinical Care Standard
- PMBH – Developed, "Acute Delirium Management Guideline" - incorporating 7 principles (non pharmacological & pharmacological)
- Non-pharmacological in first instance
- Ensuring falls prevention strategies are implemented for all "At Risk" patients

Questions

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