THE DYING MIND

Executive Function: Cognitive Impairment, its expression, and dying.

Vulnerable minds. The Brain Bit.

- The mind is a construct of many aspects, the brain, life experience, and the present situation.
- Observing its function: Language, Behaviour [emotions and decisions], Movement.

Outline

- Patients and families.
- Executive Dysfunction in relation to cognitive impairment.
- Investigations and Assessments.
- Impact of cognitive impairment in illness

Brian, the gladioli man

- Intra- cerebral Hemorrhage. Mid 60's
- Affecting right frontal Lobe.
- Good recovery.
- No obvious physical deficit.
- Not the same man. His and his wife's description.

- Lack of initiative.
- Apathy.
- Loss of emotional engagement in relationships.
- Happy enough.
- Functional in many ways, independent in personal care, was driving.
- Did not progress, or change, until

- Pancreatic Malignancy.
- Whipples procedure, deemed to have capacity
- to consent
- Insulin Dependent Diabetic.
- Took months to be independent in administering medication
- Died about 2 years later with metastatic disease.
- Appeared more cognitively impaired.

His wife

- Presented following Brian's death with delusions and memory loss.
- Eventually ended up in care about 2 years later.
- Has had progressive cognitive decline.
- Has since died in care.
- Family had EPOA, which was not invoked, but nearly was a few times.

Paul.

- Presented with behavioral problems, 2005
- Diagnosis: Alzheimer's disease.
- IHD.
- Increasing agitation and loss of independence in personal cares.
- Eventually admitted to HLC, family had EPOA had not been invoked.
- 2011, admitted to hospital with an aspiration pneumonia.

- Seen in a private hospital 2012
- 3 weeks before death at age 76.
- Signs of end stage motor neuron disease.
- Increasing Correlation between Fronto – temporal Dementia and Motor Neuron Disease.

Mrs J. L.

- Advanced Huntingdon's disease.
- Co incidental Carcinoma of the Rectum.
- Palliative Radiotherapy.
- Presented with a Bowel obstruction.
- Underwent defunctioning Colostomy.
- Died 30 months later.
- Nearly mute, and chairbound.

Mrs A.

- Carcinoma of the Lung.
- Obvious short term memory loss, no prior assessment cognitive impairment.
- Unable to remember symptoms or an emergency plan to deal with excruciating pain,
- Lives alone.
- Family distress, hold EPOA, struggling to accept that she lacks capacity to make decisions, this is what Mum wants.

Ms EH.

- Now 77.
- Parkinson's Disease, now probably 10 years.
- Prolonged delirium on initiation of madopar, with psychosis, agitation.
- Medication intolerance, benzodiazepines, antipsychotics.
- Bedbound.
- Daughter raising concerns re use of medication.

Causes of Cognitive Vulnerability

- Pre existing Mild cognitive impairment.
- Dementia.
- Delirium.
- Depression.
- Pre existing anxiety
- Organ Impairment, can be mild.
- Don't forget the liver and lungs

Executive function in Cognitive impairment and Dementia.

- Fronto- temporal Dementia.
- Other Neurodegenerative diseases
- Classification issues.
- Genetics.

- Executive Function: evaluate, decide on, plan and act, either making a cup or tea, or moving house.

Executive Dysfunction / Function

- Ability to make reasoned decisions.
- Capacity. [lack of /who decides]
- Emotional Liability.
- Apathy.
- Impulsivity.
- Concrete thinking.
- Progressive Memory and language impairment.

- Behavioural Change.
- Risk taking.
- Gambling.
- Sexually inappropriate behaviour.
- Financial mismanagement.

Capacity to make decisions.

- May be permanent or temporary.
- Best done slowly, and in a quiet place.
- Tools, experience and understanding of the questions being asked.
- Capacity for 1 thing or action, not the whole of life.
- EPOA, conveys prior thought and consent.
- PPPR imposed and a legal process.

Dementia.

- Alzheimer's Disease.
- Vascular Dementia / Stroke
- Association with Motor Neuron Syndromes/ Fronto-temporal Dementia.
- Parkinson's Disease.
- Lewy Body Dementia and Parkinson's Plus Syndromes
- Huntingdon's Disease.

Mild Cognitive impairment.

- Early problems.
- Memory Loss.
- Word finding problems.
- Independent.
- Could drive.
- Insight.
- Definite abnormalities of cognitive testing, and will likely progress towards dementia.

- Word generation test.
- Mild Short term memory loss.
- Association tests.
- Clock Drawing.

Investigations.

- History.
- Collateral information.
- Absence of other problems such as delirium and depression, or other mental health concerns.
- Scans at present improve diagnosis, rather than prove it, relevant negative investigations

Motor Neuron Disease

- Wellington Cohort.
- 3 patients in last 4 years presenting with Dementia.
- Cognitive impairment is a significant part of their illness.
- Combine progressive physical and cognitive impairment.
- Decision making is a large part of the management strategies.

- Majority of patients if examined are likely to have some degree of cognitive impairment especially in advanced disease.
- Perhaps over represented in patients seeking assisted dying.
- Patients experience, and expectations.

- Communication problems.
- Viability of symptomatic interventions, i.e.
- NIV and PEG's.

- At what point do problems with executive functions become critical.
- Effect on Carer Stress.

Parkinson's Disease.

- Cognitive impairment is inevitable if you life long enough.
- Medication Burden, can exacerbate the problems with cognitive impairment, which includes drug induced delirium, and some behavioural change.
- Levo dopa and dopamine agonists are particularly implicated in delirium.
- Parkinson's Plus syndromes do have an earlier association with cognitive impairment.

- Parkinson's Disease: longer life expectancy.
- Parkinson's Plus syndromes, MSA, PSP, CBD.
- Associated with a shorter life expectancy, and higher incidence of earlier cognitive impairment.
- MSA 5 to 6 years.
- Early executive function loss, with frontal lobe syndrome, visuo-spatial impairment, high risk hallucinations, and psychosis.

Huntingdon's Disease.

- Prototype for genetic testing.
- Combination of both cognitive and physical decline.
- Relatively rare in many palliative care circles in NZ, but will turn up, and spans the whole age range, it can present late without a family history.

Advanced Care Planning.

- Possible if plans are made early enough, process rather than a document, ongoing education.
- Executive function and reasoning are useful in forward planning.
- Guidance and structure required, direction in many activities.

Patient with Cognitive impairment who are dying with another illness.

- Older adult with Cancer, organ dysfunction.
- Prognosis is poorer.
- Carer Burden is larger.
- Frailty and Vulnerability.
- Concerns with hypoactive delirium and the possibility for improvement vs. status quo.

- Being able to follow through with management plans.
- Increased physical dependency, and risk of frailty and deconditioning
- Mild Cognitive impairment and its effects on decision making, under recognized by health professionals, creates the syndromes of frequent fliers, and acopia.

Frailty

- Term which indicates a set of conditions which indicate underlying vulnerability to deteriorate in unfamiliar environments, especially in the context of acute illness.

Frailty.

Cognitive impairment is an important aspect.

Frailty if not managed is as risky as an advanced malignancy and equally poor prognosis.

Frailty scores, age, multiple medications, requirements for increasing support.

Deconditioning

- Term which encompasses the potential to develop both physical and cognitive decline on a hospital admission.
- Characterised by decreased mobility.
- Impaired cognition, may have delirium.
- Incontinence related to above concerns.
- Associated with problems such as increased falls, and pressure areas.

Carer Burden

- High in Neurodegenerative disease with impaired cognitive function.
- Socially isolating.
- Often coupled with fatigue.
- Older adult, 2 for the price of 1, both have cognitive impairment.
- Note in older adults, carer expectations of themselves

Issues for discussions.

- What does beside cognitive testing do?
- When should it be done?
- Capacity assessment: when and who should do it?
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