The future requires the past be part of the present: dementia and day hospitals

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Goals of presentations

- Who are you?
  - Medical
  - Nursing
  - Allied health
  - Administration

- What do want to know?
  - Neurobiology
  - Diagnosis
  - Management
  - Navigating a person with dementia through day hospital
  - Case discussion—what would Margaret and I do if.....?
  - Explain the title?
Case Examples

- Patient fails to attend
- Patient bowel not emptied for colonoscopy
- Patient won’t stay
- Patient won’t leave
- Patient calls every hour the following day
- ED call asking why patient not given analgesia
- Family complain that patient should not have had procedure
Dementia

- Significant cognitive decline from baseline performance
  - One or more of five cognitive domains
    - complex attention,
    - language,
    - perceptual-motor function,
    - learning and memory and,
    - executive function
  - With concomitant impairment in independent functioning

- Not to be confused with delirium
  - Fluctuating disturbance in attention, cognition and awareness
  - Develops over hours to days
Dementia

- Now
  - Persons with dementia worldwide

- 2030
  - 75 Million

- 2050
  - 50% anaesthesia in hospitals >65 years old
Surgery

- 1909 Glaswegian surgeon
  - James Nicoll
  - Paediatric day case procedures

- Advantages
  - medical
  - social
  - economic and managerial

- Number & types of procedures expanded considerably
Day surgery models

• Four models
  • hospital-integrated facility
  • self-contained unit on hospital site
  • free-standing self contained unit
  • physician’s office-based unit

• Successful day surgery centres
  • robust pathway
  • motivated patients
Dementia impacts on health care

- Identifying problems
- Decision-making
- Finding resources
- Working with health providers
- Taking action
Identifying problems & solutions

• Tasks:
  • Acquiring information
  • Understanding significance of information
  • Generating solution

• Cognitive Domains Implicated:
  • Attention
  • Learning and Memory
  • Executive Function

• Impact of Impairment
  • Repetitive questioning or disengagement
  • Unable to recognise information
  • Rapid forgetting
  • Unable to acknowledge & dismissive of health issues
  • Unable to generate simple solutions
Decision-making

- **Tasks:**
  - Choosing the appropriate solution among possible solutions generated

- **Cognitive Domains Implicated:**
  - Learning and Memory
  - Executive Function

- **Impact of Impairment**
  - Concrete responses
  - Poor understanding of management
Finding & utilizing resources

- Tasks:
  - Using medical devices
  - Attending clinical appointments

- Cognitive Domains Implicated:
  - Praxis
  - Visuospatial and Constructional
  - Language
  - Executive Function

- Impact of Impairment
  - Failure to adhere to medication and lifestyle regimens
  - Failure to attend appointments
Working with health care providers

- **Tasks:**
  - Negotiated shared goals of care
  - Communicates with services and negotiates interpersonal relationships
  - Psychological and emotional adjustment

- **Cognitive Domains Implicated:**
  - Language
  - Executive Function

- **Impact of Impairment**
  - Unable to agree upon goals of care and may appear stubborn
  - Unable to describe symptoms
  - Delay to seek help
  - Argumentative
  - Overwhelmed at changes in care regimen
Taking action

- Tasks:
  - Adheres to monitoring, medication and lifestyle change

- Cognitive Domains Implicated:
  - Executive Function
  - Learning and Memory
  - Mood and Motivation

- Impact of Impairment
  - Impulsivity
  - Difficulty overriding ingrained behaviour patterns
  - Poor medication adherence
  - Low mood
Implications for Practice

- Non-adherence = unrecognized comorbid dementia
- Impact of dementia varies
  - Cognitive domain(s) affected
    - Different types of dementia (>100)
      - Alzheimer’s
      - Vascular
  - Severity of the impairment
  - Complexity of the self-care tasks.
- Clinical assessment important
  - identify executive dysfunction
  - assess patient capability of undertaking the tasks required
  - Tailor to patient’s individual cognitive deficits
- Continued support of independence and empowering patients within their capabilities must also be maintained.
Day Hospitals

- Sufficiently skilled staff
- Pre-operative assessment facilities
- Optimisation through anaesthetic review
- Capable of high volume and turnover of patients
  - Rapid recovery times
  - Discharge
    - medication,
    - information and,
    - care instructions
- Conduct short term follow up through telephone calls or community nursing
Benefits for older people

- Day surgery represents a prime opportunity
- Reduces risk
  - Minimal changes in environment and lifestyle
  - Circumvents deconditioning
  - Does not require prolonged immobilisation,
  - Decreases risk of postoperative complications
  - Reduces the risk of hospital acquired infections
- Offer improved quality of life and autonomy
  - Cataract = Vision
  - Continence
- At an increased risk of adverse intra-operative events and mortality
Stages

- **Pre-operative**
  - identification of dementia syndromes
  - surgical futility
  - decision making capacity
  - anaesthesia type/route and pre-operative preparation (e.g. bowel prep for colonoscopy)

- **Peri-operative**
  - anaesthetic agent type
  - route of agents
  - surgery duration
  - Influence the development of post operative delirium and other systemic complication in patients with pre-existing dementia
Stages

- Post-operative
  - complications
  - pain management
  - discharge disposition and follow up
  - reduced ability to
    - self-care
    - adhere to post-operative care instructions
    - participation in post-operative recovery
    - Leads to increased mortality
Dementia is often missed and remains undiagnosed
  - significant risk of worsening cognitive state post-operatively and anaesthetic risk

Ethically, cognition must be assessed for consent
  - Role of surrogate decision maker
  - May not always represent the patient’s wishes
  - Limited benefit or futile treatment

Number of cognitive testing tools
  - Mini Mental State Examination (MMSE)
    - 7-10-minutes
    - Short form tests available eg MiniCog

If identified need multidisciplinary discussion to modify care
Pre-operative 2

- Simple example
  - Three and half times more likely to have inadequate bowel preparation.
    - lack of comprehension
    - difficulties swallowing

- Frailty and cognitive function predictive
  - poor surgical outcomes
  - higher in-hospital medical expenditure
  - longer in-hospital length of stays
Peri-operative 1

- Anaesthetic agent type, route of agents, intra-operative hypothermia and surgery duration influence the development of post operative delirium and other systemic complication in patients with pre-existing Alzheimer’s disease

- Anaesthetic choice varies dependent on
  - procedure and
  - anaesthetist preference
Peri-operative 1

- Age related changes
  - Pharmacokinetics
    - reduced hepatic and renal clearance
  - Pharmacodynamics
    - increased sensitivity to central depressants
- Limited physiological reserve
  - higher risk of developing circulatory and respiratory complications
  - increased risk of worsening cognition with sedation
Peri-operative 2

- Data is conflicting
  - least post operative cognitive dysfunction had anaesthetic regimens of propofol only
  - others have demonstrated that there is no difference with combinations
  - additional of midazolam improves treatability for colonoscopy procedures.

- Where possible and feasible for the type of day surgery procedure taking place, light sedation should be preference
Delirium is a common, frequently unrecognised post-operative complication
- up to 73% of elderly post operative patients.

Risk factors for delirium at discharge
- vision impairment
- dementia
- functional impairment and
- high comorbidity
- Medication
Post-operative pain

Dementia may prevent patients from accurately reporting post-operative pain
  - poor communication
  - reduced likelihood to report sensation
  - altered nociception.

Pain scales should be employed
Analgesic agents should be chosen
  According to the patient
    Adherence, dysphagia, existing pre-operative pain
    Surgical procedure and post-operative setting
  Peripheral nerve blocks
  Paracetamol effective at controlling post-operative pain in the elderly
    Oxycodone and tramadol may be used sparingly
    Risk of confusion with opioid agents
Post-operative 3

- Delayed discharge due to their care needs not being effectively catered
  - May not be able to return to their baseline immediately
  - Dependent on others
  - Require transition to a location that provides higher level care
- Complexity of follow-up
- Reliance on self management
Clinicians’ role

- Patients require individually tailored strategies
  - Cognitive
  - Psychological
  - Emotional
  - Social

- Patients with dementia
  - adjust to the individual
  - Adjust to cognitive domains impaired
  - Promote their capacity for self-management.
Collaboration

- Patients and care givers
- Assess a patient’s current capabilities
- Identify potential barriers to success
- Adjust provision of information to the patient’s skill set
Conclusion

- Complex
- Risk and benefit to patient
- Better preparation reduces risk
- Emerging issue requires standards of practice
- Engagement of non-geriatric medicine and non-gerontology nursing specialties
Questions

- What will we do differently?
- What is the national approach for day hospital?


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Title explained

- The future requires the past be part of the present: dementia and day hospitals
- Future = day hospital and health care in 2020
- Past = patient’s life and clinical history
- Present = day hospital provision of care now