Delirium

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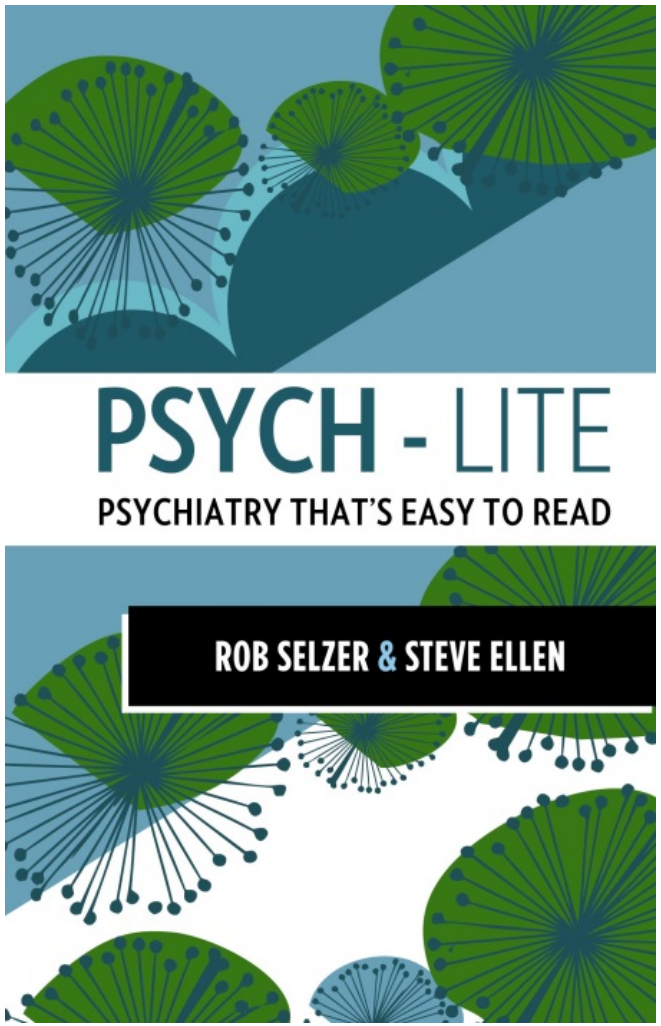
PSYCH - LITE
PSYCHIATRY THAT'S EASY TO READ
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Delirium

- Definitions – why is it missed so often?
- Clinical features
- Prevalence,Costs and Recognition etc.
- Causes – systemic and neurological
- Treatment

Terminology

- Terminology varies
- neurologists tend to use acute confusional syndrome (ACS) or acute brain syndrome
- definitions vary according to background of author
- seen as a manifestation of widespread brain dysfunction

Terminology

- “a change in mental state in which *the most salient deficits* occur in overall attentional tone” (neurologist)
- “acute change in cognitive state characterised by fluctuating consciousness and inattention” (physician)
- DSM-IV criteria list 3 categories: “disturbance of consciousness *and* change in cognition *of rapid onset*”

Delirium: Clinical Features

- A transient organic brain syndrome
  - acute onset and fluctuating course
  - global impairment of cognitive function
  - altered level of consciousness
  - reduced attention and concentration
  - increased or decreased psychomotor activity
  - disordered sleep/wake cycle
  - perceptual disturbances (hallucinations, illusions)

Delirium: Clinical Features

- ***Associated features:***
  -irritability
  -distractibility
  -mood disturbance - depression /anxiety
    - nocturnal exacerbation and day-time somnolence
- ***Prodromal symptoms:***
  -restlessness
  -anxiety
  -sleep disturbance

Clinical features

Some focal neurological findings can also be seen e.g.:

- Extensor plantar responses
- Coarse tremour, myoclonus or asterixis
- Asymmetric reflexes
- Asymmetric power in severe cases, especially elderly and often in hypoglycaemic states

Subtypes

- Hyperalert/hyperactive
  - agitation
  - hyper-reactivity
  - aggression
  - hallucinations
  - delusions

(Olofsson et al,1995; Camus et al,2000)

Subtypes

- Hypoalert/hypoactive
  - reduced reactivity
  - motor and speech retardation
  - facial inexpressiveness

- Mixed states (most common)

Camus et al 2000

Other Clinical Presentations

- “non-compliance” and denial
- anxiety and panic
- “crescendo pain”
- “adjustment problems”
- suicidal ideation and actions
- staff and family conflict

Kissane & Smith,1996; Saravay, 1987; Coyle et al,1994; Kinkel, 1997; Akechi et al,1999; Farrell & Ganzini,1995

Incidence

Studies conflict:

- 10% of all hospital in-patients
- 30-50% of in-patients on geriatric wards
- 40% of post-operative patients (but very wide variation – greatest in bypass patients)
- (Dyer et al 1995 meta analysis of 26 published studies – selected from 374)

Recognition

- Recognition
  - generally under-diagnosed and under-treated
  - un-recognised in 20%
  - common misattributions:
    - depression
    - anxiety
    - non-organic psychosis

Faisinger et al, 1991, Margolis,1994, Saravay,1987

Risk factors

- increasing age
- pre-existing cognitive impairment
- drug abuse
- anticholinergic medications
- polypharmacy
- NOT gender, race, marital status, nor education

Pathophysiology

- poorly understood despite 2500 years of recognition (Hippocrates)and a hundred years of research
- adequate function of the CNS depends on the metabolic integrity of its constituent neurons and glia
- polysynaptic circuits appear to be especially vulnerable to toxic/metabolic insults
- believed to arise from any disruption in the “cholinergic axis”

Costs and morbidity

- Most studies suggest that mortality at least doubles (10-65%)
- Poor prognostic indicator for all surgery
- Markedly lengthens inpatient stay
- Excess annual health expenditure of $US2 billion (*Inouye 1994*)

Causes

D-drugs
E-endocrine
L-Lungs
I-ischaemia
R-renal
I-infections
U-unknown
M-metabolic

Causes

Systemic vs. neurological

Systemic by far commonest:

- ***Toxic/metabolic***
- Hypovitaminosis
- Infection
- Endocrine
- Hypoxia
- other

Special toxic causes

- Alcohol intoxication and withdrawal
- Drug intoxication and withdrawal
- Chemical toxins and poisoning
- Carbon monoxide

Neurological causes

- Multifocal brain lesions – HT, vasculitis, DIC, air and fat emboli, SAH
- Infections – meningitis, encephalitis and brain abscess
- Non-convulsive status epilepticus
- Trauma
- Neoplastic conditions

Treatment- 4 goals

- **Recognitio**n (hardest part)
- **Investigation** (easiest part)
  a) to see if this is delirium
  b) to find the cause of the delirium
- **Symptomatic** treatment
- **Definitive** treatment

Investigations- for diagnosis of delirium

- History from nurses/notes- MSE on admission, fluctuation etc
- History from Family- usual level of cognitive function, rate of decline
- Serial MMSE
- EEG- sometimes useful

Investigations-for cause

- Careful review of drug history
- Corroboration with family members regarding medications at home, diet and pre-morbid function

Investigations- for cause

- Toxic/metabolic screen
- MSU +/- blood cultures
- CXR and abdominal films
- CT/MRI brain
- EEG – which should show diffuse slowing to be diagnostic
- LP in cases where no obvious cause apparent

Investigations

- A common mistake is to consider the symptoms to be psychiatric if no clear cause is found.
- No clear cause is found in about 20% of cases.
- Severe mental illness can lead to confusion, but this is rare, and when it is present, it is usually associated with dementia.

Symptomatic Treatment

- Aimed at specific indications *(Carter,1995)*
  - aggression
  - safety
  - hallucinations
  - distress
  - capacity to cooperate with care

Symptomatic Treatment
1. Medications

- very limited research base
- antipsychotic agents
  - to treat agitation and psychotic symptoms
  - superior to benzodiazepines
- haloperidol 1-2mg every 2-4 hours
  - elderly: 0.25-0.50mg every four hours
  - +/- short acting benzodiazepine (lorazepam in US studies), however I prefer diazepam (valium), as available, easy to prescribe, doses rarely mucked up!!
- Olanzepine 2-5 mg O/IM

Symptomatic Treatment
1. Medications

- Precautions
  - Increased sensitivity to extrapyramidal effects of DA antagonists (eg HIV Infection)
  - Drug interactions (eg anticholinergic effects)
  - Pharmacokinetics
  - Polypharmacy
  - Sedation (eg hydration needs)

Symptomatic Treatment
2. Environment

- environmental and supportive interventions
  - optimal level of environmental stimulation
  - familiarize environment & optimize orientation
  - reduce sensory impairments
  - address fear and demoralization
  - liaison roles
  - Watch safety: attendant Vs Special nurse Vs in safer room

Definitive Treatment

- Obviously depends on the cause, however,
- Research findings support:
  - Discontinuation of unnecessary psycho-active medication
  - attention to hydration
  - change of opioid or dose modification
  - use of antipsychotic drug if needed

Prevention

- primary
  - identify risk groups
  - enhance environment
  - modify causative factors (eg drug treatment practices)
- secondary
  - early identification through cognitive monitoring
  - early intervention - identify key early symptoms (eg sleep disturbance, agitation, irritability, somnolence)
  - Identify and address precipitants

Prevention

- Tertiary Prevention
  - maintain and maximise function
    - relief of distress
    - reduce demands
    - identify predisposing factors (eg dementia)
    - environmental factors
    - intervention with family and staff: goals of care
    - address key tasks for patient
      - engaging with staff and family
      - participation in care at realistic level

Screening and Diagnosis

1. Screening Instruments
   - Confusion Rating Scale *(Williams et al,1988)*
   - Clinical Assessment of Confusion *(Vermeersch, 1990)*

2. Diagnostic Instruments
   - Confusion Assessment Method *(Innouye et al,1990)*
   - Delirium Symptom Interview *(Albert et al,1992)*

3. Delirium Severity Rating Scales
   - Delirium Rating Scale *(Trzepacz,1999)*
   - Memorial Delirium Assessment Scale *(Breitbart et al,1997)*

Delirium: Impact on Family

- roles and functions (esp decision-making)
- demoralization and fatigue
- functions needed and lost & demands on carers
- impact of behavioural change
- attribution for these changes
- conflict: family, staff
- children
- ?bereavement outcome

Issues for Staff

- confrontation with regression and fragmented mental states
- high care demands amidst poor cognitive function
- therapeutic pessimism and hopelessness
- blame from the family

Issues for Staff

- overestimating decisional capacity
- difficulty establishing realistic limits/safety for the dying patient
- negotiating amidst complex ethical pressures and frameworks (eg autonomy and self determination)

Issues for Staff

- re-establishing relationship with the patient post-delirium
- impact on team/unit function
- responding to family distress and patterns of response

Conclusion

- Delirium
  - common clinical syndrome
  - often missed
  - often inappropriately attributed to psychiatric cause
  - significant impact on patient, family and staff
  - significant benefits from comprehensive treatment