ACUTE CONFUSIONAL STATE (DELIRIUM) IN OLDER PEOPLE

RECOGNITION AND ASSESSMENT

Recognition

- Patients with following conditions are at high risk:
- dementia
- visual impairment
- physical frailty
- any severe illness
- infection and dehydration
- renal impairment
- recent surgery (e.g. fractured neck of femur)
- alcohol excess
- polypharmacy

Identify these patients on admission and incorporate prevention strategies (see **Immediate treatment**) into their care plan. This is a medical emergency even though it may appear to present with psychiatric symptoms.

Assessment

Assess mental status of **all** elderly patients on admission. Repeat whenever there are subsequent changes in mental function

- **Assessment must include**:
- history taken from patient **and** a relative
- Confusion Assessment Method (CAM) screening instrument www.consultgerirn.org/uploads/File/trythis/issue13_cam.pdf
- Hodkinson's abbreviated mental test

Or AMT 4 (age,dob, place ,year)

- a full clinical examination, including a neurological and rectal examination
- basic investigations as below

Confusion Assessment Method (CAM) screening instrument

To have a positive CAM result, patient must display:

- Presence of acute onset and fluctuating course

AND

- Inattention (e.g. 20-1 test with reduced ability to maintain attention or shift attention)

AND

- Either disorganized thinking (disorganized or incoherent speech) or altered level of consciousness (usually lethargic or stuporous)

Hodkinson's abbreviated mental test

1) Age
2) Time (nearest hr)
3) An address for recall at end of test (this should be repeated by patient to ensure it has been heard correctly), such as 42 West Street
4) Year
5) Name of hospital
6) Recognition of two persons (doctor, nurse etc)
7) Date of birth
8) Date of World War I
9) Name of present monarch

10) Count backwards (20-1)

- award one point for each correct answer
- a score of seven or less is consistent with impaired brain function

Differential diagnosis

- Confusion is a symptom, not a diagnosis. Establish in every case whether you are dealing with:
- delirium (acute confusional state) – acute confusion in a previously well patient, which develops over a short period (hours to days), is always associated with clouding of consciousness and is usually precipitated by an acute medical or surgical problem
- dementia – continuing confusion relatively unchanged for a month or more
- delirium superimposed on dementia – acute confusion in a patient with previous cognitive impairment who has become suddenly much worse
- acute functional psychosis – such as schizophrenia, late onset schizophrenia – like psychosis or persistent delusional disorder (a variant of schizophrenia commencing in patients aged >60 yr) or severe depression
- any combination of above. See Table 1 for distinguishing features

Investigations

- FBC
- Full biochemical screen (including calcium)
- Blood glucose
- CRP
- Thyroid function tests
- Blood cultures
- Urinalysis
- Chest X-ray
- ECG
- Pulse oximetry
- Consider need for: lumbar puncture, blood gases, EEG, B_{12}, folate
- Consider CT scan of head **only** where a brain lesion suspected (fall, head injury, focal neurological signs, evidence of raised intracranial pressure)

Table 1: Clinical features of delirium, dementia and acute functional psychosis

Onset	**Sudden**	**Insidious**	**Sudden**
Course over 24 hr	Fluctuating, worse at night	Usually stable	Stable
Consciousness	Reduced	Clear	Clear
Attention	Globally disordered	Usually normal	May be disordered
Orientation	Usually impaired	Variable	May be impaired
Hallucinations	Common	Often absent	Predominantly auditory
Memory	Recent and immediate memory impaired	Recent and remote memory impaired	Variable
Involuntary movements	Often asterixis or coarse tremor	Often absent	Usually absent except for side effects of drugs
Physical illness or drug toxicity (see Table 2)	Always present	Often absent	Usually absent

Table 2: Underlying conditions commonly associated with delirium

• Chest • Urinary tract	• Hypoxia • Fluid, electrolyte or acid-base disturbances • Hypo- or hyperglycaemia • Uraemia • Endocrinopathies (hepatic failure)	Therapeutic use, abuse of, or withdrawal from: • Alcohol • Hypnotics • Tranquillizers • Sedatives • Antidepressants • Anticholinergics • Anticonvulsants • Antiparkinsonian agents • Oral hypoglycaemics • Digoxin • Cimetidine • NSAIDs	• Post-ictal • Head trauma • Multiple cerebral infarcts • Intracerebral neoplasm • Meningitis	**Sensory overload** • New environment • Constipation • Faecal impaction • Pain • Urinary retention **Sensory deprivation** • Visual impairment • Auditory impairment **Miscellaneous** • Myocardial infarction • Pyrexia • Hypothermia

IMMEDIATE TREATMENT

Delirium

Environment

- Nurse in quiet environment (light in the day, dark at night)
- **Ensure:**
- appropriate lighting for time of day
- regular and repeated cues to improve personal orientation (at least three times daily)
- clocks and calendars to improve orientation
- hearing aids and glasses available and in good working order
- continuity of care from nursing staff
- encouragement of mobility
- patient approached and handled gently
- elimination of unexpected irritating noise (e.g. pump alarms)
- **Avoid:**
- physical restraints (including cot sides, 'geriatric chairs' etc) – these have not been shown to prevent falls and can increase risk of injury – it is preferable to nurse patient on a low bed or with mattress on floor
- inter- and intra-ward transfers

Relatives and friends

- Family and friends, who may be able to calm patient, are encouraged to visit
- Explanation of cause of confusion to relatives; encourage them to bring in familiar objects and pictures and to participate in rehabilitation (e.g. to help with feeding and drinking)

Clinical treatment

- Treat or remove underlying causes (e.g. treat infection, stop all non-essential medication, correct hypoglycaemia/hypoxia/hypothermia)

- Correct and/or maintain water and electrolyte balance, nutrition and vitamin supply (especially B complex) in patients with alcohol dependence or malnutrition – see **Alcohol withdrawal** guideline
- For alcohol withdrawal delirium – see **Alcohol withdrawal** guideline
- In malnourished patients or those with a history of ethanol abuse, in whom Vitamin B deficiency is likely, give Strong Compound Vitamin B orally, 2 tablets 8 hrly
- Regular analgesia given when needed (e.g. paracetamol)
- Adequate fluid intake to avoid dehydration
- Good diet, fluid intake, and mobility to avoid constipation
- Good sleep pattern (milky drinks at night, exercise during day)
- **Avoid** catheters and constipation

If patient severely disturbed and a danger to self or others – see recommendations for assessment and non-medical management in* Aggressive and violent patients *guideline. However, for drug treatment in older people, see below

Drug treatment

- Keep use of sedatives to a minimum
- If absolutely necessary, consider sedation with lorazepam 500 microgram-1 mg (15 microgram/kg) orally/IM (max 2 mg in 24 hr) or (if no heart disease) haloperidol 500 microgram orally/IM up to 2 hrly to a maximum dose of 5 mg in 24 hr:
  - use one drug only, starting at lowest possible dose
  - ensure one-to-one nursing while dose of psychotropic medication is titrated upward in a controlled and safe manner
  - do not use atypical antipsychotics (risperidone, olanzapine) in patients with dementia or cerebrovascular disease because of increased risk of stroke
- If extrapyramidal symptoms and pyrexia occur, consider neuroleptic malignant syndrome
- If underlying cause of confusion has been treated, no further anti-psychotic treatment may be necessary
- If maintenance treatment required, consider haloperidol 500 microgram orally daily or 12 hrly. Review all medication at least every 24 hr. No long-term treatment should be required in patients with delirium

Acute functional psychosis

- Neuroleptics or sedatives may be of use in patients with delusions, hallucinations or paranoia but should not be used for insomnia, restlessness, wandering or difficult behaviour

SUBSEQUENT MANAGEMENT

Delirium

- **Further investigation:**
  - if confusion slow to resolve, consider vitamin B_{12} and folate assays, and syphilis serology, and review diagnosis (Table 2)
- **Reconditioning of patient:**
  - encourage good food, adequate fluids, bowel regulation, pain control, sufficient sleep, avoidance of sedation and attention to appearance (clothes, shoes, teeth, spectacles, hearing aids, hair and shaving)
- **Rehabilitation:**
  - start early **and be comprehensive** to avoid permanent immobility, pressure sores, infections and thromboembolic disease. Always liaise with physiotherapist, occupational therapist and nursing staff. Where rehabilitation likely to be prolonged, refer to department of elderly medicine where all the resources of the multidisciplinary team are available

Dementia

- For insomnia, restlessness, wandering or difficult behaviour, avoid medication

- For psychotic symptoms (e.g. delusions, hallucinations or paranoia), use haloperidol up to a maximum maintenance dose of 500 microgram 8 hrly
- review response within two weeks with a view to reducing dose or stopping treatment
- for patients requiring longer term treatment, review treatment every six months and try to reduce or stop it

MONITORING

- If change occurs, repeat assessment of mental status (see **Recognition and assessment)**
- If sedation given, monitor respiratory rate, pulse and blood pressure

DISCHARGE AND FOLLOW-UP

- Many elderly patients will make a full recovery and can be discharged without referral to another agency
- Offer reassurance and support – delirium is very unpleasant and can leave patients with unpleasant half recollections of events and delusions
- Refer to social services if community care package required or full community care assessment needed
- Consider referral to a community psychiatric nurse or a psychogeriatrician or liaison psychiatry services based at new cross hospital once acute symptoms are treated/subsided if further assessment is required.
- In patients with **pure delirium**, stop all sedatives before discharge
- For patients with **established dementia**, give relatives or carers contact numbers of Alzheimer's Disease Society (0207 306 0606) for support and leaflets. Alert Mental Health Services to the admission if patient known to Mental Health Services.
- In patients with **dementia and/or psychotic symptoms**, keep sedation to a minimum. Ask GP (in discharge letter) to review sedative medication two weeks after discharge and then at least 6-monthly (aiming to reduce and eventually discontinue treatment)
- For patients with a Hodkinson's abbreviated mental test score less than eight but not previously known to have dementia, arrange review by GP to confirm or exclude a diagnosis of dementia and consider referral to the memory clinic at Penn hospital if Alzheimers Dementia suspected
- If patient has history of memory problems, consider referral to Memory clinic at Penn hospital if Alzheimers Dementia suspected. Refer to CMHT (older adults) if other dementia syndrome suspected.