Management of Post ITU Psychosis

‘Life after life-support’
How big a problem is it?

Is it an **ITU** problem?

Can we prevent / treat it?
How big a problem is it?

ITU acquired weakness

PTSD

Anxiety

Depression

Sleep problems

Chronic pain

ITU acquired weakness

35% mechanically ventilated patients

50% of sepsis patients

15-50% in ITU at least 1 week

Consequences not only for patient but for their family and society in general

10-50% experience PTSD, anxiety, depression and sleep problems

50% don’t return to work in first year and 33% never return
Is it an ITU problem?

PTSD

Treatment should be simple

*Rest and sleep important components*
Can we prevent / treat?

**Physical morbidity**
- Pain
- Muscle loss
- Muscle weakness
- Contractures

**Non-physical morbidity**
- Post traumatic stress disorder (PTSD)
- Anxiety
- Depression
- Sleep problems

Symptoms regarded as ‘normal’ when faced with a critical illness

What we do in ITU has direct effect on patient outcome and chance of recovery to previous level of functioning.
Can we prevent / treat?

What to expect

What is ‘normal’
Can we prevent / treat?

- Length of stay
- Time on ventilator

Reduce risk factors

Address acute issues
  - Pain
  - Sleep
Can we prevent / treat?

Delirium

Agitation

Sympathetic ‘storming’
Management of Delirium, Agitation and Sympathetic ‘Storming’

After the acute phase of brain injury patients may experience either sympathetic storming or agitation.

Agitation is seen in various neurological conditions, while sympathetic storming is seen predominantly after severe traumatic brain injury due to autonomic hyper-reflexia.

Both make weaning from sedation and mechanical ventilation difficult.

Sweating, palpitations and tremors in association with agitation may be seen in patients withdrawing from alcohol – if there is a history of alcohol abuse start Chlordiazepoxide as per UCLH formulary.

In some patients agitation may be a manifestation of delirium - complete RASS and CAM-ICU if appropriate.

Delirium risk factors
Dehydration
Hypoxemia
Pain
Infection
Drugs
Prolonged ICU stay
Prolonged ventilation
Visual, hearing impairment
Immobility
Advancing age

PREVENTION/TREATMENT
Environmental changes
For agitation:
Haloperidol
Risperidone
Clonidine
Dexmedetomidine
Avoid benzodiazepines

For sleep:
Melatonin
Zopiclone
Chloral hydrate

Environmental factors
Noise reduction
Day: Exposure to natural light
Night: Exposure to artificial light
Optimum ambient temperature
Improved communication
Repeat orientation to day, time, place

Richmond Agitation Sedation Scale (RASS)
Score Term
+4 Convulsive
+3 Very agitated
+2 Agitated
+1 Restless
0 Alert and calm
-1 Drowsy
-2 Light sedation
-3 Moderate sedation
-4 Deep sedation
-5 Unresponsive

Symptoms
Confusion
Restlessness and agitation
Limited awareness
Disturbed perception of environment
Inability to learn new tasks

GCS > 8
Disturbed behaviour seen as an early symptom in patients with post-traumatic amnesia (PTA)
Resolves with return of ability to retrieve and store information
In longer term usually due to personality changes

GCS < 8
Episodic and exaggerated response occurring spontaneously or to stimulus
Resolves over time but may take weeks
Should be managed in short term as symptoms can be severe and may exacerbate brain injury

Symptoms
Tachycardia
Tachypnoea
Diaphoresis
Hypertension
Abnormal movement of limbs
Arching of back (severe cases)

Symptoms
Restlessness and agitation
Limited awareness
Disturbed perception of environment
Inability to learn new tasks

Treatment (Best practice based)
Acute / rapid control – lorazepam / haloperidol see algorithm
To facilitate weaning consider the following prior to ceasing sedation:
Risperidone NG 0.5–2mg/dos or Clonidine infusion 20–80mcg/hr (see protocol) (Introduce NG dose [0.1mg tablets] as needed)
Avoid using sedation / analgesia to treat agitation (but exclude pain as cause)
Exclude other causes (UTI / metabolic disturbance)
Early mobilisation
Minimise sensory stimulation
Promote normal sleep pattern

Treatment (Best practice based)
Atenolol NG or Clonidine infusion (600mcg in 30ml normal saline) titrated until symptom control (20–80mcg/hr)
(Observe for bradycardia and hypotension)
Consider weaning clonidine after 24–48 hours free of ‘storming’ – stopping abruptly may cause ‘hypertensive crisis’ especially if patient has been on large dose or for > 1 week
Avoid over-stimulation
May require individual patient parameters to avoid over-treatment with sedation
Early mobilisation / tilt table

Environmental factors
Noise reduction
Day: Exposure to natural light
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Repeat orientation to day, time, place

RAPID CONTROL OF ACUTE AGITATION
1. Implement behavioural interventions, structure environment and minimise sensory stimulation
Response
2. Consider adding oral medication e.g. Risperidone 0.5–4mg / day, Carbamazepine 400-600mg twice daily
Response
3. Give either: IV or IM Lorazepam 1-2 mg
Wait 10 minutes
Response
IM Haloperidol 2-10mg
IV Haloperidol 2.5-5mg
Wait 30 minutes
No response
4. Add oral medication as 2
Response
5. Repeat 3 to maximum:
IM Haloperidol 18mg
IV Haloperidol 10mg
or Lorazepam 4mg
Consider Neuropsychiatry referral
No response
6. Add oral medication as 2
Response
7. Seek consultant advice

Monitor for side-effects of drugs
Cardiovascular:
QT prolongation
Hypotension
Neurological:
Extrapyramidal

Avoid over-stimulation
May require individual patient parameters to avoid over-treatment with sedation
Early mobilisation / tilt table

Guidelines are largely best practice based
Exclude other causes of agitation e.g. urinary retention
Give IV/IM drugs over 2.3 min - never give Diazepam IM
In elderly, doses of 50% or less may be appropriate
Guidelines do not apply to later maladaptive behaviour after brain injury

Dehydration
Hypoxemia
Pain
Infection
Drugs
Prolonged ICU stay
Prolonged ventilation
Visual, hearing impairment
Immobility
Advancing age
Transition from ITU to ward

Critical Care Outreach

Discharge from Intensive Care
Information for Patients and Relatives

Produced by The Intensive Care Society
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Discharge home

Patient’s GP

ITU follow-up clinic