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*Draft Timothy Aebi May 2013*

*Intensive Care Unit*

Treatment of acute delirium in the in the ICU

Delirium or ‘acute confusional state’ is common on ICU’s and has a huge impact on the patient’s health (higher mortality, prolonged hospitalization etc.). It may require weeks or months to fully recover. This guideline highlights a few aspects on how to approach delirium in the ICU. The final decision has to be made according to each patient’s condition and is up to the responsible consultant.

***General:***

* Delirium can be caused by most drugs, infections and metabolic disturbances
* Risk factors for delirium include advanced age, dementia, malignancy, postoperative period and acute or chronic pain.

***Preventing delirium:***

* Following measures have been proven to be **effective in preventing delirium**:
	+ Avoid all unnecessary drugs
	+ Mobilize early
	+ Minimize physical restraints
	+ Use visual and hearing aids, expose patient to daylight
* **Benzodiazepines should be avoided** in patients with or at risk for delirium (exceptions are sedative drug withdrawal and alcohol withdrawal).
* **Prophylactic medications (cholinesterase inhibitors, antipsychotic agents) DO NOT prevent delirium.**

***Pharmacological Treatment:***

* Note that no medications are currently approved by the FDA to treat delirium. Nevertheless, existing guidelines often recommend Haloperidol as the medication of choice.
* Consider giving **Thiamine** to all delirious patients.
* If ever possible the newer, atypical antipsychotic drugs should be used first (eg Quetiapine, Risperdone, Alanzapine). Out of these, **Quetiapine (Seroquel®) seems to show the best evidence for efficacy**. These drugs are not available as parenteral formulas. Quetiapine should be preferred as a ‚sleeping tablet‘ in the ICU.
* **Haloperidol IV** should only be used in hyperactive delirium and where agitation might put the patient or staff at risk of injury.
	+ Give Haloperidol i.v., not i.m.
		- Extrapyramidal symptoms are less common with intravenous Haloperidol than when given orally or i.m.
		- i.m. injections can be very painful and worsen delirium.
	+ Haloperidol can cause QT-prolongation (but less than other antipsychotics do), continuous cardiac monitoring is mandatory.
	+ Haloperidol is contraindicated in patients with parkinsonism and Lewy-body dementia.
* **Dexmedetomidine (Dexdor®)** seems to become a very promising alternative and is now used in many ICU for the treatment of hyperactive delirium.

**Identify and treat all precipitating factors!**

- drugs, antibiotics

- urine, stool, thirst etc.

- pain

**Supportive nursing**

- prevent self injury

**Promote normal sleep-awake cycle**

**Early physical rehabilitation**

**Minimize antocholinergics**

**Delirium suspected** (hyperactive/ hypoactive)

**Non alcoholic Delirium**

**Hyperactive delirium:**

Dexmedetomidine

0.05 – max. 2.0 mcg/kg/h IV

**First line:**

Quetiapine 25-50mg p.o.

**Manifest agitation:**

Initial dose

*Haloperidol* 1-2mg po/IV

Repeat initial dose 8-hourly

Clinical improvement?

Yes

**Patients with Parkinson’s disease or Lewy-body dementia**

should be primarily treated with

*- Quetiapine (Seroquel)*

e.g. 5mg 6-hourly

Can be crushed and given over n/g tube (bioavailability might be impaired)

For emergencies consider:

-*Zofran* 8mg IV (1st choice)

- *Temesta* 2-4mg IV (2nd choice)

No

No improvement after 30 min:

**Double** *Haloperidol* dose

Calculate *Haloperidol* dose of last 24h and give over next 24h divided in 3-4 doses

Clinical improvement?

Yes

No

No improvement after 30min:

**Double** *Haloperidol* dose

(max. 20mg/d)

Reduce *Haloperidol* dose by 50% every second day

**Acute Alcohol Withdrawl:**

simply replace Haloperidol by *Lorazepam (Temesta®)* in the flow chartand proceed using the same dosing scheme.

For **vegetative symptoms** (tachycardia, hypertension) consider *Catapresan (Clonidine®)* 75-150mcg IV max. 6-hourly or Dexmedetomidine

Clinical improvement?

Yes

No

No improvement after 30min:

Low dose *Propofol*  infusion

Cave: Propofol does not treat delirium itself. Keep treatment as short as possible!