Guidelines for Rapid Tranquilisation of disturbed adult patients

University Hospitals of Leicester NHS
NHS Trust

B11/2016

1. Introduction

1.1. Rapid tranquilisation is the administration of carefully monitored amounts of medicines over a brief period of time to achieve rapid, short-term behavioural control of extreme agitation, aggression and potentially violent behaviour to reduce risk of harm.

1.2. The aim of rapid tranquilisation (RT) is to quickly calm the severely agitated patient in order to reduce the risk of imminent and serious harm to self or others. An optimal response would be a reduction in agitation or aggression without sedation, allowing the patient to participate in further assessment and treatment.

1.3. The use of medicines for the purposes of RT has associated risks and can be distressing for patients. It is essential that RT is used with due regard to the safety of individuals. For the majority of patients RT is not necessary and it should not be resorted to routinely. All decisions and discussions with patients should be documented in the patient record. Intervention may be indicated for patients with a wide range of conditions including but not limited to patients with known psychiatric illness.

1.4. RT should be considered in patients undergoing prolonged restraint (longer than 10 minutes) in order to reduce the duration of restraint and facilitate further assessment and treatment.

1.5. This document provides guidance to staff on use of RT in disturbed adult patients in line with NICE guidelines.

2. Scope

2.1. This guideline is for use by all medical, nursing and midwifery and pharmacy staff employed by UHL, including bank, agency and nursing staff.

2.2. It applies to all adult patients (over 18) presenting with acutely disturbed or violent behaviour.

3. Guideline Statements

3.1. Assessment

3.1.1. Review the patient for organic causes of violence and aggression. These may include hypoxia, low blood sugar, illicit medicine or alcohol use, drug withdrawal, head injury or sepsis. Refer to the UHL policy on Acute Alcohol Withdrawal Management and the policies on Head Injury (B30/2014), if appropriate.

3.1.2. A diagnosis of delirium should be excluded. Refer to the UHL Policy for the Assessment and Management of Patients with Altered behaviours (B30/2017) if appropriate. Please use the Think Delirium Tool

- If a person with delirium is distressed or considered a risk to themselves or others, first use verbal and non-verbal techniques to de-escalate the situation..

Distress may be less evident in people with hypoactive delirium, who can still become distressed by, for example, psychotic symptoms.

- If a person with delirium is distressed or considered a risk to themselves or others, and verbal and non-verbal de-escalation techniques are ineffective or inappropriate, consider giving medication (see policy) starting at the lowest clinically appropriate dose and titrating cautiously according to symptoms.

3.1.3. For patients on the Critical Care Unit please refer to the UHL Sedation on the Critical Care sedation and management of delirium guidelines (C1/2001).

3.1.4. Try non-medication measures to de-escalate the situation e.g. verbal de-escalation, distraction, reassuring and avoiding interrogation.

3.1.5. For agitated, violent or aggressive patients with Learning Disabilities the Acute Liaison Nurse Service (ALNS) must be contacted when available (Monday to Friday 08.30 to 16.30 on 0116 2584382). For out of hours follow the treatment protocol below and contact the ALNS at the earliest available time.

3.1.6. Refer to the UHL policy for Preventing and Managing Violence and Aggression (B11/2005) for further advice of non-drug management, guidance. Refer also to the Deprivation of Liberty Safeguards Policy (B15/2009)

3.2. Treatment (see algorithm)

3.2.1. Use of medication for RT should be used with caution due to the following risks:

- Loss of consciousness instead of tranquilisation
- Over sedation with loss of alertness
- Loss of airway
- Cardiovascular and respiratory arrest
- Interaction with medicines already prescribed or illicit medicines taken
- Damage to patient-clinician relationship
- Underlying physical disorders
- Particular caution should be applied in the frail or older cohort of patients and in those with Learning Disabilities.

3.2.2. All prescriptions for RT must be prescribed as single (stat) doses, and should not be repeated until the effect of the initial dose has been reviewed.

3.2.3. In all cases patients should be informed that medication is going to be given and why.

3.2.4. Where pharmacological treatment is considered necessary, oral treatment with lorazepam 1-2mg should be given if the patient will take oral therapy. Where this is refused the following treatment options should be used:

First line:

Lorazepam 1-2mg orally (consider reducing dose for frail patients)
Lorazepam 2mg IM (1mg in frail/older patients)

Wait 30 minutes to assess response. If there is a partial response to IM lorazepam, a further dose should be considered. A maximum dose of 4mg/24 hours should be given. If there is no response, consider IM haloperidol with IM promethazine

Lorazepam

- Before administration lorazepam should be diluted

- Add 1ml of water for injection to the ampoule containing lorazepam 4mg in 1ml
- Ativan is available in a 2ml ampoule to facilitate dilution
- Final concentration is 4mg in 2ml (2mg in 1ml)
- Draw up the required volume as per the table

Dose	Volume of liquid required
0.5mg	0.25ml
1mg	0.5ml
2mg	1ml

In the Emergency Department lorazepam 1-2mg IV may be administered as an alternative if IV access is available, and response assessed after 10 minutes. Note there is an increased risk of side effects with this route and it should only be used where there is the capacity to closely observe the patient for adverse effects. One further dose may be administered after 30minutes although caution should be exercised in the elderly and those with low body weight. Discuss with senior clinician before administering second dose.

Second line: Haloperidol 5mg IM combined with promethazine 50mg IM (administered as separate injections)
In older patients reduce haloperidol dose to 2.5mg IM

3.2.5. IM haloperidol combined with IM promethazine should be avoided if there is evidence of cardiovascular disease, including a prolonged QT interval, or if no ECG has been carried out. In the absence of known cardiovascular disease if a baseline ECG is not available the prescriber should consider the risks and benefits of treatment, noting use in these circumstances would be considered an 'off-label' use. Haloperidol should be avoided in patients with Parkinson's Disease and Lewy Body dementia.

Wait 30 minutes to assess response. If there is a partial response to haloperidol IM combined with promethazine IM consider a further dose. A maximum of two doses of promethazine and 15mg haloperidol in 24 hours can be given. If there is no response and lorazepam has already been tried seek urgent senior review including psychiatric input.

Promethazine injection is stocked in the Emergency Department and on the Acute Medical Units and Clinical Decisions Unit

3.2.6 If Haloperidol is Contra-indicated then consider the use of IM Aripiprazole if an IM antipsychotic is required within the Emergency Department only. Aripiprazole still can exacerbate extrapyramidal effects in Parkinson's patients but to a slightly lesser extent than Haloperidol. Senior review is required before use.

3.3. Monitoring

3.3.1. Following RT the patient should be nursed in the recovery position if not fully alert. The patient must be placed in a bed/trolley space that allows good visibility for staff and be under 1:1 supervision as per the Altered Behaviours in Patients UHL policy. The patient must undergo the following monitoring:

- Pulse
- Blood pressure
- Oxygen saturation
- Level of hydration
- Respiratory rate
- Temperature
- Level of consciousness

Please use the Tool appendix 2 to assess sedation and monitoring required. Record observations within Nervecentre.

Monitoring frequency should be dependent on patient condition but at least hourly until there are no further concerns. Monitor every 15 minutes if the BNF maximum dose has been exceeded or in the following circumstances:

- Patient appears to be asleep or sedated
- Consumption of illicit drugs or alcohol
- Pre-existing physical health problem
- Where there has been prolonged or face down restrictive physical intervention

3.3.2. Flumazenil should be immediately available in all situations where benzodiazepines (e.g. lorazepam) have been given for RT. If required for benzodiazepine-induced unconsciousness or respiratory depression, a dose of 200 micrograms IV over 15 seconds should be given. A further 100 micrograms can be given after 60 seconds if required, repeated up to a total dose of 1mg. In mixed overdose or intoxicated patients with respiratory depression secondary to lorazepam, intubation may be preferred due to the theoretical risk of seizures. Patients who have received flumazenil should be monitored in at least a level 1* dependency area for a minimum of 4 hours.

3.3.3. There is a risk of extrapyramidal side effects when haloperidol and promethazine are given for RT. Procyclidine should be available, and a dose of 5mg IM given if required.

3.3.4. If the patient has received haloperidol and has a history of cardiac disease or a baseline ECG is not available an ECG should be considered and assessed by a clinician able to recognise and deal with cardiac rhythm abnormalities.

The response to treatment should be monitored closely. If, despite the guidelines above, the patient remains agitated, violent or aggressive then senior help should be sought. In particular, concerns about the patient's airway, or physical injury because of prolonged restraint* must be escalated to senior medical help. Sedation by means of a general anaesthetic and intubation should be considered with involvement of the Intensive Care team. Sedation by means of a general anaesthetic and intubation must only be attempted by the Intensive Care team.
**defined by NICE as longer than 10 minutes.*

3.4 Review

3.4.1 Post-incident review should take place on all occasions where parenteral therapy is required for RT. Indications for all medicines should be documented in the patient record as well as the response to treatment. Consideration should be given to referral for urgent psychiatric review. Any requirement for ongoing medicine treatment should be assessed. A senior decision maker (Registrar or above) should be informed immediately post-incident if not involved.

3.4.2 A Datix form must be completed for all occasions where use of parenteral therapy is required for RT associated with the use of physical restraint.

4. Education and Training

There are no additional education and training requirements required to implement this guideline. All staff who may be required to prescribe or administer medicines under this guideline should ensure they are familiar with the cautions, contra-indications, side effects and administration of these medicines as per expectations of routine clinical practice.

5. Monitoring and Audit Criteria

Key Performance Indicator	Method of Assessment	Frequency	Lead
Appropriate use of medicines for RT	Review of Datix incidents relating to RT Audit using ePMA data	Continuous	Medicines Optimisation Committee
RT used in appropriate patients	Post-incident review Review of violence and aggression incidents requiring restraint where RT used	Continuous	Relevant CMG with support from H&S team

6. Legal Liability Guideline Statement

Guidelines or Procedures issued and approved by the Trust are considered to represent best practice. Staff may only exceptionally depart from any relevant Trust guidelines or Procedures and always only providing that such departure is confined to the specific needs of individual circumstances. In healthcare delivery such departure shall only be undertaken where, in the judgement of the responsible healthcare professional' it is fully appropriate and justifiable - such decision to be fully recorded in the patient's notes

7. Supporting Documents and Key References

a. NICE Guideline: Violence and aggression: short-term management in mental health, health and community settings. 28 May 2015 http://www.nice.org.uk/guidance/ng10
b. British National Formulary and UHL medicines formulary
c. UHL policy for Preventing and Managing Violence and Aggression (B11/2005) Deprivation of Liberty Safeguards. B15/2009
d. Policy for the Assessment and Management of Patients with Altered behaviours (B30/2017)
e. Acute Alcohol Withdrawal Management. B30/2014
f. Head Injury policies: Head Injuries with positive CT: UHL Emergency Department guideline; Head Injuries following inpatient falls: UHL Emergency and Specialist Medicine guideline. (B8/2010)
g. Sedation UHL Critical Care Unit Guideline. C1/2001
h. use of the THINK DELIRIUM Support Tool
i. Summaries of Product characteristics on http://www.medicines.org.uk/emc/

8. Key Words

Rapid Tranquilisation, Aggression, Sedation, RT

This table is used to track the development and approval and dissemination of the document and any changes made on revised / reviewed versions

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Rapid Tranquilisation Algorithm

Appendix A

When all other non pharmacological interventions and de-escalation options have been tried and failed

Oral route available for administration?

YES

Oral route
Lorazepam
Initial dose 1-2mg
(0.5mg – 1mg in frail/ elderly)

NO

Intramuscular (IM) route

Lorazepam
Initial dose 1-2mg
(1mg in frail/elderly)

Commence observations

Response in 30 minutes ?

Adequate response

No further doses required. Continue to observe.

Partial response

Repeat **lorazepam**
Oral : 1-2mg
IM : 1-2mg

Maximum 4mg/24 hours

No response – second line
Haloperidol 5mg IM **+Promethazine** 50mg IM
Administered as separate injections

Maximum of 100mg promethazine IM & 15mg IM haloperidol in 24 hours

Or for pts with Contra indications to above use **Aripiprazole** 9.75mg IM
Maximum 30mg in 24 hours – use in Emergency Dept only

Frail / Elderly patients reduce the doses above including maximum dose by half

No Response after further dosing above

Seek Senior Medical advice including psychiatric advice

Caution:
Antipsychotics in known cardiovascular disease, or risk of seizures eg alcohol withdrawal
Avoid benzodiazepines in patients with respiratory depression

Intravenous (IV) Route
This route carries a higher risk of adverse reactions and should only be used in the Emergency Department
IV Lorazepam 1-2mg
Response assessed after 10minutes

IM haloperidol combined with IM promethazine should be avoided if there is evidence of cardiovascular disease, including a prolonged QT interval, or if no ECG has been carried out. In the absence of known cardiovascular disease if a baseline ECG is not available the prescriber should consider the risks and benefits of treatment, noting use in these circumstances would be considered an 'off-label' use.

Haloperidol should be avoided in patients with Parkinson's Disease and Lewy Body dementia.

Observations every 15minutes for first hour, then every 30mins for the next 3 hrs

- Pulse
- Blood pressure
- Oxygen saturation
- Level of hydration
- Respiratory rate
- Temperature
- Level of consciousness

Adverse reactions:

Antipsychotic induced acute dystonia
Procyclidine 5mg IM. Repeat after 20minutes if needed.

Benzodiazepine induced respiratory depression
Maintain a patent airway
Give Oxygen (caution in patients with COPD)
Flumazenil 200micrograms IV over 15 seconds. Repeat dose 100micrograms every 60 seconds up to a maximum dose of 1mg
Monitor patient for minimum of 4 hours

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Appendix B

Addressograph

Acute Behavioural Disturbance Observation chart

Sedation Assessment Tool (SAT)

Score	Responsiveness	Speech
+3	Combative, violent, out of control	Continual loud outbursts
+2	Very anxious and agitated	Loud outbursts
+1	Anxious and restless	Normal / Talkative
0	Responds easily to name	Speaks Normally
-1	Asleep but rouses if name is called	Slurring or prominent slowing
-2	Physical stimulation	Few recognisable words
-3	No response to stimulation	Nil

Date : ……/……/…….

Time : _:_hrs	_:_	_:_	_:_	_:_	_:_	_:_	_:_	_:_	_:_
Sedation score (SAT)									
RR>12 (tick box if YES)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Systolic BP >90	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pulse >60	☐	☐	☐	☐	☐	☐	☐	☐	☐
O2 Sats (RA) >90%	☐	☐	☐	☐	☐	☐	☐	☐	☐
Additional sedation ?	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N

Time : _:_hrs	_:_	_:_	_:_	_:_	_:_	_:_	_:_	_:_	_:_
Sedation score (SAT)									
RR>12 (tick box if YES)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Systolic BP >90	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pulse >60	☐	☐	☐	☐	☐	☐	☐	☐	☐
O2 Sats (RA) >90%	☐	☐	☐	☐	☐	☐	☐	☐	☐
Additional sedation ?	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N