Title	Guidance on the drug treatment of Acute Behavioural Disturbance Adult (18-65 years)
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Owner/Person Responsible	Kyna Harvey
Developed by	Mental Health Team
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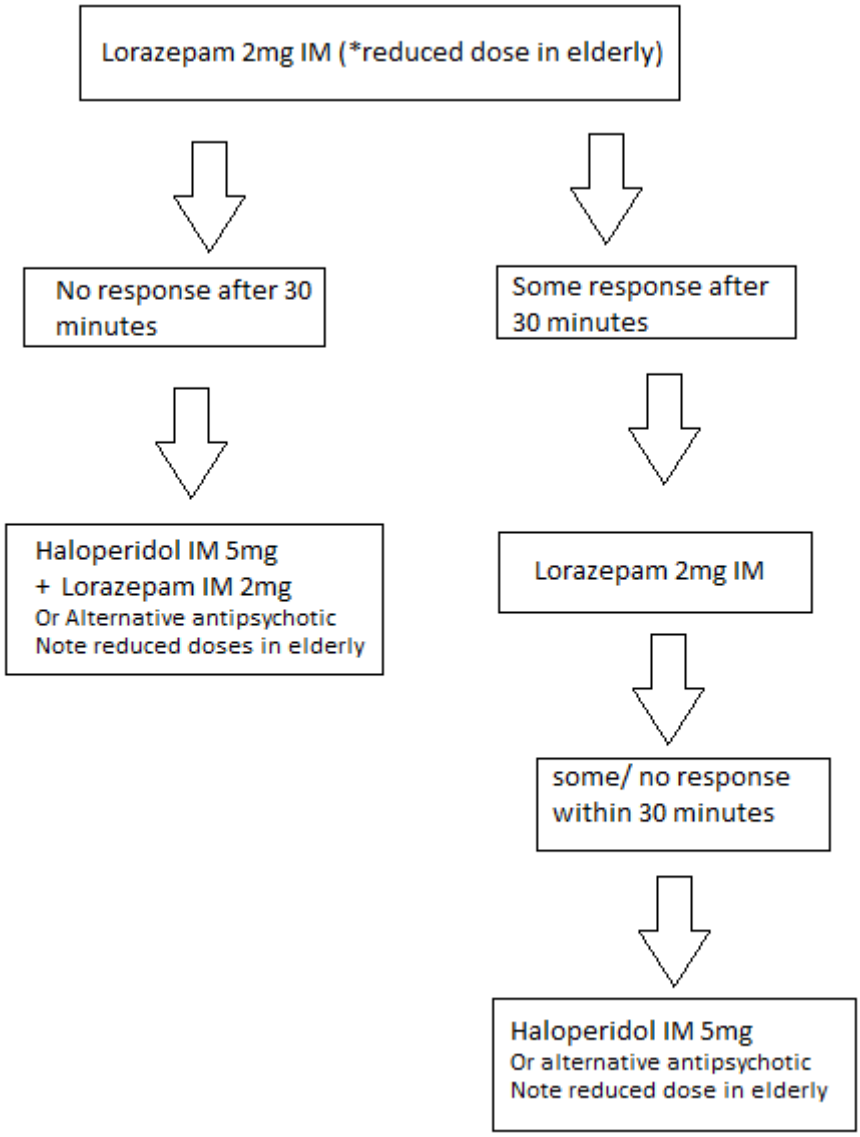
Intramuscular Drug Treatment of Acute Behavioural Disturbance Adults (18-65 years old):



Note:

IM promethazine 50mg can be used if lorazepam is unsuitable or contra-indicated (max 100mg/ 24 hours) see notes below.

For alternative antipsychotics to haloperidol see notes in Appendix 1

For doses in elderly:

See elderly guideline here

Reduce lorazepam dose to 0.5mg-1mg (max 2mg/24hr)

Reduce haloperidol dose to 0.5-1mg (max 2mg/24hr)

Developed by: Dr Sibel Turhan and Kyna Harvey
Approved by: Area drugs and therapeutics committee
Date: November 2018
Reviewed July 2019, February 2021

Appendix 1: Prescribing Information

Non response to rapid tranquilisation/ intramuscular therapy:

- Obtain consultant advice if more than 2 dose of IM lorazepam or haloperidol and 1 dose of IM promethazine required.
- Consider Zuclopenthixol Acetate (Acuphase) on CONSULTANT psychiatrist advice only

Choice of therapy:

Patient Group	Try First	Try Second	Max dose in first 24 hours
Highly aroused, physically robust adult including those already on antipsychotic drugs	Lorazepam 2mg	Repeat, then try haloperidol 5mg	Lorazepam 4mg Haloperidol 12mg
Alcohol withdrawal	Use alcohol withdrawal guideline for chlordiazepioxide		
Acute disturbance due to medical condition or alcohol intoxication	Haloperidol 5mg		Haloperidol 10mg
Psychotic agitation (acute disturbance due to a psychiatric illness)	Haloperidol	Lorazepam or Haloperidol	Haloperidol 20mg Lorazepam 8mg
Frail older people or severe respiratory disease	Haloperidol 2.5mg	Lorazepam 0.5-1mg	Haloperidol 10mg Lorazepam 4mg
Dementia with Lewy Bodies, Parkinsons disease	Lorazepam 0.5-1mg	Repeat	Lorazepam 4mg
Delirium	Haloperidol 2.5mg	Repeat	Haloperidol 10mg
Agitation/ behavioural disturbance in pregnancy	Haloperidol or lorazepam or promethazine as above		

Choice of treatment:

- A benzodiazepine is recommended as first line (if there is limited clinical info, antipsychotic naive, prolonged QTc)
- Oral antipsychotic choice will depend on regular antipsychotic prescription and previous response to medication. Using an additional dose of an effective regular antipsychotic may be appropriate.
- Promethazine is indicated for patients who are tolerant to benzodiazepines or who have had previous adverse drug reactions or who have previously abused/been addicted to benzodiazepines.
- A baseline ECG is required for all patients prior to administration of haloperidol (as per license) and is now contra-indicated in combination with other potentially QTc prolonging medication. If this is not possible, the risks and benefits of haloperidol treatment should be documented clearly in notes.
- A baseline ECG is required for all patients prior to administration of zuclopenthixol acetate.

	Choice of IM Antipsychotic Medication	
Drug	**Dose**	**Information**
Haloperidol	5mg IM, max 20mg/ 24 hours (adult)	- Contra indicated in patients with prolonged QTc, patients with a history of dystonia with first generation antipsychotics and patients with lewy body dementia
Olanzapine	Adult: 5-10mg IM, max 20mg/ 24 hour, max 3 injections in 24 hours Elderly: 2.5-5 mg IM max 20mg/ 24 hour, max 3 injections in 24 hours	- Unlicensed product (imported from the EU)(document rationale for use clearly) - Do not administer a benzodiazepine within 1 hour of administration - Safer in Qtc prolongation and patients with a history of EPSE to first generation antipsychotics - **Under consultant psychiatrist advice only**
Aripiprazole	9.75mg IM, repeated once in 24 hours	- Safer in QTc prolongation, in combination with QTc prolonging medication and in patients with a history of Qtc prolongation/ arrhythmias - **Under consultant psychiatrist advice only**

Risk Associated with IM rapid tranquilisation	
Drug Class	**Risk**
Benzodiazepines	Loss of consciousness, respiratory depression or arrest, cardiovascular collapse in patients receiving clozapine and paradoxical aggression.
Antipsychotics	Loss of consciousness, risk of sudden death (cardiac/respiratory complications), seizures, akathisia, dystonia, dyskinesia, NMS and excessive sedation
Antihistamines	Excessive sedation, painful injection, hypotension, arrhythmias, additional antimuscarinic effects.

Post Rapid Tranquilisation Monitoring			
Guideline	**Post- RT parameters**	**Post-RT monitoring**	**Additional recommendations**
Maudsley Prescribing Guidelines 12th edition (Taylor et al. 2015)	Temperature, pulse, blood pressure and respiratory rate	Every 10 minutes for 1 hour then half hourly until the patient is ambulatory	• If monitoring of vital signs is not possible observe for symptoms of pyrexia, over sedation and general physical well being • Resuscitation facilities must be made available

Management of problems resulting from the use of IM medication	
Problem	**Remedial Measure**
Acute dystonic reaction	Procyclidine 5mg IM, repeat after 20minutes uf necessary, max 20mg/24hours. Do not prescribe IM haloperidol alone
Orthostatic hypotension	Lie patient flat, raise legs, monitor closely including regular BP measurement.
Reduced respiratory rate (<10/minute or O2 saturation <90%)	Give oxygen. Give flumazenil if benzodiazepine induced. Initially 200micrograms IV over 15 seconds, then 100 micrograms at 60 seconds. Maximum 1mg /24 hours.
Abnormal physical observations	Continue to monitor regularly. Escalate to ward doctor. Record on NEWS chart and follow instructions with regard seeking medical assistance. Consider risk of neuroleptic malignant syndrome and arrhythmias in patients with a raise temperature.

Pharmacokinetics of IM medication		
Drug	**Time to peak concentration (T_{max})**	**Elimination Half Life ($T_{1/2}$)**
Haloperidol	20 minutes	20 hours
Lorazepam	60-90 minutes	12- 16 hours
Promethazine	2-3 hours	5-14 hours
Zuclopenthixol Acetate	36 hours	*At 72 hours levels are 1/3 of max*

QTc Off license information:
Haloperidol is contra-indicated in QT-interval prolongation. Co-prescription of haloperidol with another QT interval prolonging drug should be avoided wherever possible; but if there are no appropriate clinical alternatives then the prescriber should document this use as unlicensed and appropriate monitoring agreed. NHS Borders ADTC supports this unlicensed use of haloperidol where the benefits of the treatment exceed the risks of treatment.

Developed by: Dr Sibel Turhan and Kyna Harvey Date: November 2018
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Promethazine has a conditional risk of QTc prolongation. The BAP guidelines recommend a combination of promethazine and haloperidol as a safe and effective method of rapid tranquilisation.

References:

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BNF Online edition