Guidance for the use of Midodrine in patients with Postural Hypotension

This guidance was initially drafted by Gillian Smith (Medicines Information Pharmacist) in consultation with Dr Simon Lee (Consultant Orthogeriatrician) to support all physicians managing a patient who is prescribed midodrine.

Midodrine is unlicensed in the UK and any doctor who prescribes the medication legally assumes clinical responsibility for the drug, and the consequences of its use.

Introduction:

Midodrine is a sympathomimetic drug with a similar chemical structure to ephedrine. It has mainly alpha-agonist properties which causes peripheral vasoconstriction, but it has no direct cardiac stimulatory effects.

Midodrine is used in the management of postural hypotension unresponsive to first line pharmacological treatments (such as fludrocortisone), or where these treatments are not tolerated by the patient.

Contraindications:
- Coronary Heart Disease or peripheral vascular disease (may be considered in stable disease, at the discretion of the initiating Consultant)
- Severe heart disease such as hypertrophic obstructive cardiomyopathy or valvular stenosis
- Phaeochromocytoma
- Urinary retention, or conditions predisposing to urinary retention (such as prostatic hypertrophy)
- Thyrotoxicosis
- Patients who are pregnant or breast-feeding

Use with caution in the presence of any of the following:
- Cor pulmonale
- Acute or severe chronic renal impairment
- Hypertension (do not use if uncontrolled)
- Combination with other alpha-agonist sympathomimetics (e.g. ephedrine, pseudoephedrine - ingredients commonly found in cold and flu remedies).
- Liver impairment (lack of information about use – monitor LFT’s)

Drug interactions

An increase in the incidence of akathisia has been reported when midodrine was given in combination with promethazine.

An increase in blood pressure may occur when midodrine is used in combination with other sympathomimetics (such as nasal decongestants), vasopressor drugs or monoamine- oxidase inhibitors (avoid combination with MAOI’s if possible).

Combination with medications which reduce heart rate (e.g. digoxin, beta blockers, some antipsychotic and dementia drugs) may increase the risk of reflex bradycardia.
Dosage, administration and treatment duration:

Treatment with midodrine will be initiated by a specialist (usually within the falls and frailty clinic) and dose titration should only take place following further clinic assessment, which must include both lying and standing BP measurements. The dosing/titration schedule is as follows:

<table>
<thead>
<tr>
<th>Starting Dose</th>
<th>2.5mg TDS</th>
<th>The patient should be advised to take the doses during the day (e.g. morning, lunch and late afternoon/early evening) to minimise the risk of developing supine hypertension during sleep.</th>
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<tbody>
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<td>First titration, if starting dose not effective</td>
<td>5mg TDS</td>
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<tr>
<td>Second titration</td>
<td>10mg TDS</td>
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Higher doses may be used but this is very rare. Treatment will be reviewed periodically by the initiating specialist.

Excipients:

BHNFT currently uses Gutron brand tablets, made by Nycomed (imported from Germany). The inactive ingredients in Gutron tablets are magnesium stearate, talc, silicon dioxide, cellulose and corn starch.

Monitoring:

The only monitoring routinely required whilst on midodrine is blood pressure, to make sure that the dose is optimally titrated, and deterioration in control of BP should be referred back to the initiating specialist.

Liver and renal function need only be monitored if the patient has pre-existing dysfunction.

Adverse effects:

The most common side effects of treatment include headache, agitation and irritability, tingling and itching sensations (primarily of the scalp), goose pimples and feeling cold.

Other effects which may occur less frequently include nausea and GI disturbances, supine hypertension (more common with larger doses), cardiac arrhythmias, palpitations and either bradycardia or tachycardia, and urinary retention (occurs rarely).

Pregnancy and Lactation:
Midodrine use is contraindicated during pregnancy and lactation.

Immediate advice and support

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<tr>
<th>Contact Details</th>
<th>Telephone No</th>
<th>Fax No</th>
<th>Email</th>
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<tbody>
<tr>
<td>Medicines Information BHNFT</td>
<td>01226 432857</td>
<td>01226 434431</td>
<td><a href="mailto:Gilliansmith2@nhs.net">Gilliansmith2@nhs.net</a></td>
</tr>
<tr>
<td>Dr Simon Lee</td>
<td>01226 730000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Mohammed Al-Bazzaz</td>
<td>01226 730000</td>
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References:

1. BHNFT Midodrine Policy May 2010
2. Gutron patient information leaflet (translated into English)
3. Stockley’s Drug Interactions, accessed online at www.medicinescomplete.com