AMBER GUIDANCE FOR MANAGEMENT OF ORTHOSTATIC (POSTURAL) HYPOTENSION

BACKGROUND

Definition

Orthostatic hypotension is defined as a fall in blood pressure (BP) of at least 20 mm Hg systolic and 10 mm Hg diastolic within three minutes in the upright position. Characteristic symptoms include light-headedness, visual blurring, dizziness, generalised weakness, fatigue, cognitive slowing, leg buckling and gradual or sudden loss of consciousness.

Assessment

The key feature of symptoms related to orthostatic hypotension is that they are precipitated by head-up postural change and relieved by lying flat. Other factors may influence symptoms e.g. speed of positional change, coughing. There may be a history of impairment of other organs under autonomic control e.g. lack of sweating suggests a neurogenic cause. A detailed drug history should be taken.

Investigations to suggest cause include blood glucose, electrolytes and checking urine for proteinuria (may be secondary to systemic amyloidosis).

NON-PHARMACOLOGICAL MANAGEMENT

Lifestyle advice

- Encourage adequate fluid intake (to avoid dehydration) and fibre (to reduce constipation).
- Avoid large meals, excessive alcohol
- Don't take hot baths, avoid very warms rooms (risk of overheating)
- Advice on postural changes – stand or sit up slowly, clench and unclench calf muscles before getting up, avoid bending from waist or stretching up, avoid standing or sitting still for very long time, sleep with head raised (if possible 5 inches above mattress)

Medication review

- Reduce dose or discontinue any prescribed medication which may cause or worsen symptoms

Prescribe compression stockings. Ideally, should be above knee; however if not tolerated or clinically appropriate can use below knee stockings.

DRUG TREATMENT

Drug treatment may be started by or under advice of specialist team e.g. specialist in endocrinology, elderly medicine, neurology or renal medicine

Fludrocortisone tablets

Unlicensed indication, recommended in BNF for neuropathic postural hypotension

a) Initial dose: 50 to 100 micrograms once daily, increased to a usual maximum of 300 micrograms once daily (higher doses up to 500 micrograms daily occasionally advised by specialist, higher than BNF max).

Check sitting and standing BP before each dose titration, at least once weekly until dose and condition stable. Discontinue if blood pressure in either position increases above 180/100 mm Hg or is considered clinically significant.

b) Contraindications, cautions, drug interactions and adverse effects are as per systemic corticosteroid treatment. Avoid abrupt withdrawal – seek specialist advice for gradual withdrawal. Monitor blood pressure while withdrawing treatment.

For full details of contraindications, cautions, drug interactions and adverse effects check BNF www.bnf.org.uk **or SPC (**www.medicines.org.uk**).**

Midodrine tablets (2.5mg, 5mg)

Licensed for treatment of orthostatic hypotension due to autonomic dysfunction (use for idiopathic orthostatic hypotension is unlicensed).

a) Dose and administration

Initial dose 2.5mg three times a day, increase if necessary at weekly intervals to maximum of 10mg three times a day.

Last dose should be taken at least 4 hours before bedtime, in order to avoid supine hypertension.

The maximum daily dose in haemodialysis is 30mg. The second split dose can be given mid-way through the dialysis process.

Example of titration regime (may vary according to individual patient factors – refer to specialist advice)

Week 1: 2.5mg three times a day

Week 2: 5mg each morning, 2.5mg afternoon, 2.5mg early evening

Week 3: 5mg each morning, 5mg afternoon, 2.5mg early evening

Week 4: 5mg three times a day

Check sitting and standing BP before each dose titration, at least once weekly until dose and condition stable. Discontinue if blood pressure in either position increases above 180/100 mm Hg or is considered clinically significant.

b) Contraindications and cautions

Avoid in

- Severe organic heart disease (e.g. bradycardia, heart attack, congestive heart failure, cardiac conduction disturbances or aortic aneurysm).
- Hypertension.
- Serious obliterative blood vessel disease, cerebrovascular occlusions and vessel spasms.
- Acute kidney disease.
- Serious prostate disorder.
- Urinary retention.
- Proliferative diabetic retinopathy.
- Phaeochromocytoma.
- Hyperthyroidism.
- Narrow angle glaucoma
- Pregnancy and breast-feeding.

Renal impairment – manufacturer's recommends avoid in severe renal impairment (eGFR < 30 ml/min/1.73 m^2). However midodrine is recommended for treatment of orthostatic hypotension including dialysis related hypotension (www.renaldrugdatabase.com).

Use with caution in patients with

- Severe disturbance of autonomic nervous system
- Atherosclerotic disease especially with symptoms of intestinal angina or claudication of the legs.
- Prostate disorders – can cause urinary retention
- Renal (see note above) and hepatic impairment

c) Drug interactions

Avoid concomitant use with

- sympathomimetics and vasopressor agents, including over the counter medicines e.g. MAOIs, tricyclic antidepressants, antihistamines, decongestants, thyroid hormones, reserpine, guanethidine
- adrenergic blockers e.g. prazosin, phentolamine – effect of midodrine blocked
- digoxin

Use with **caution** (increased monitoring) if used with

- Drugs which reduce heart rate

- Systemic corticosteroid – may potentiate hypertensive effects

d) Adverse effects

[Very common (>1/10); common (>1/100, <1/10); uncommon (>1/1,000, <1/100); rare (>1/10,000, <1/1,000), very rare (<1/10,000)]

Psychiatric disorders, Uncommon: Sleep disorders, insomnia.
Nervous system disorders; Common: Paraesthesia, Uncommon: Headache, restlessness, excitability, irritability.
Cardiac disorders: Uncommon: Reflex bradycardia, tachycardia, palpitations, ventricular arrhythmia
Vascular disorders: Common: Supine hypertension (Blood pressure above or equal to 180/110 mmHg) more common with daily doses above 30mg, uncommon: Supine hypertension (blood pressure ≥ 180/110 mmHg) with daily doses up to 7.5 mg
Gastrointestinal disorders; Common: Nausea, Dyspepsia, Stomatitis, vomiting, Uncommon: abdominal pain
Hepatobiliary disorders: Rare: Abnormal hepatic function, Raised liver enzymes
Skin and subcutaneous tissue disorders: Very common: Piloerection. : Common: Chills, Rash, Pruritus (mainly of the scalp), Flushing.
Renal and Urinary disorders: Very common: Dysuria. Common: Urinary retention. Uncommon: Urinary urgency.
Other reported symptoms include increased tear production.

PATIENT INFORMATION

For both treatments

- Patients should be informed of risks and benefits of treatment and the importance of monitoring
- Patients should be given advice on other coping strategies for managing symptoms of postural hypotension

For fludrocortisone

- Inform patient that unlicensed indication and provide local leaflet for unlicensed medicines (as per local policy).
- Do not stop taking without discussion from doctor – may need to stop gradually
- Carry steroid card
- Ensure healthcare team are aware of fludrocortisone treatment when receiving any medical, dental treatment
- Store tablets in fridge (for products that require fridge storage)

MONITORING

Baseline and initial monitoring should be undertaken or arranged by initiating prescriber.

On-going monitoring should be undertaken or arranged by on-going prescriber, typically by patient's general practitioner

AMBER GUIDANCE

Humber Area Prescribing Committee

Baseline

- Standing and sitting BP (as per assessment)
- Check LFT/U&Es for electrolytes and eGFR

During initiation / titration

- Standing and sitting BP, once weekly
- U&Es – one week after initiation for electrolytes, then monthly until dose stable

Maintenance treatment

- Monitoring of postural BP every 3 months
- For fludrocortisone – check electrolytes every 3-6 months, as advised by specialist
- For midodrine - check eGFR and hepatic function every 3 – 6 months, more frequently if dysfunction

Discontinue treatment

- Blood pressure in either position increases above 180/100 mm Hg or is considered clinically significant.
- Persistent labile blood pressure after stabilisation

Contacts

During office hours:

Contact the relevant consultant's secretary as per clinic letter (HUTH, NLAG or CHCP)

HUTH Specialist pharmacists:

Specialist Pharmacist - Renal: Aaron Acquaye aaron.acquaye@nhs.net

Specialist Pharmacist – Elderly Medicine: Helen Maslen, Amelia Pollard or Tasneam Gadin (01482) 311678

Specialist Pharmacist – Endocrinology: Matthew Heppel-Holden (01482) 311678 matthew.heppel1@nhs.net

Specialist Pharmacist – Neurology: Priscilla Kanyoka (01482) 311663 Priscilla.Kanyoka1@nhs.net

Interface Pharmacists:

Jane Morgan – Principal Pharmacist – Interface, HUTH – 01482 461519 jane.morgan14@nhs.net

Andrew Karvot – Interface Pharmacist – NLAG 03033 302646 a.karvot@nhs.net

Out of hours:

Contact the relevant on-call Registrar via HUTH or NLAG switchboard.

References:

Ashley C & Dunleavy A. The Renal Drug Database www.renaldrugdatabase.com [accessed 06/04/23 – subscription required]

Bramox Summaries of Product Characteristics (Brancaster Pharma Ltd) available at www.mhra.gov.uk

Lahrman et al (2006) EFNS guidelines on the diagnosis and management of orthostatic hypotension. European Journal of Neurology 2006, 13: 930–936

NICE Postural hypotension in adults: fludrocortisone NICE advice [ESUOM20] Published date: October 2013 www.nice.org.uk/advice/ESUOM20

NICE Orthostatic hypotension due to autonomic dysfunction: midodrine Evidence summary: new medicine Published: 6 October 2015 NICE www.nice.org.uk/guidance/esnm61

APPROVAL PROCESS

Document and version control	**This information is not inclusive of all prescribing information and potential adverse effects. Please refer to the SPC (data sheet) or BNF for further prescribing information.**		
	Version number:		1
	Date approved by Guidelines and SCF Group:		17/5/2023
	Date approved by APC:		07/06/2023
	Review date:		June 2026
Version number	Author	Job title	Revision description:
1	Jane Morgan	Principal pharmacist HUTH	Updated from HERPC guidance.