PODCAST - Working Practice Document, No. 06

Title: Intensive BP Lowering

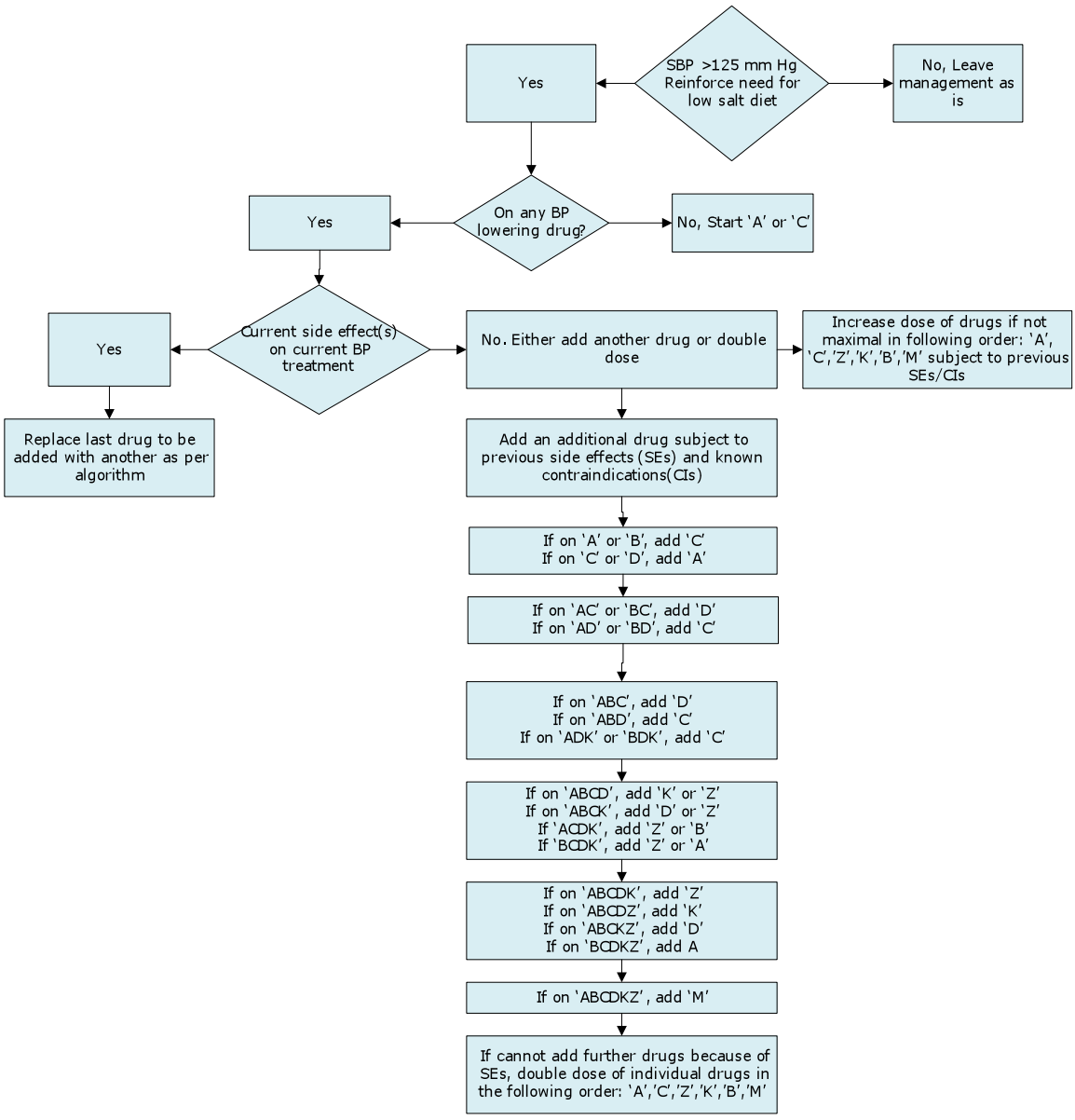
Blood pressure lowering (intensive)

- It is vital that BP is measured and recorded at baseline and then at each follow-up clinic visit
- The target is systolic BP <125 mmHg. But equally, it is vital to maximise the difference in SBP between intensive and guideline groups, i.e. at least SBP difference 10 mmHg.
- Follow the 2011 NICE-BHS guidelines where possible. Ideally, start with a 'C-drug' first-line (calcium channel blocker, e.g. amlodipine 5 mg od), then add an 'A-drug' second-line (ACE-I or ARA, e.g. perindopril 2 mg od or losartan 50 mg od), then add a 'D-drug' third-line (thiazide-like diuretic, e.g. indapamide 2.5 mg od), then add a potassium-sparing diuretic (fourth-line, e.g. spironolactone 25 mg od). Avoid ß-receptor antagonists in mono/di/tri-therapy unless there is a specific indication (ß-receptor antagonists may be useful 4th or 5th line).
- Adding a new BP drug at medium dose is usually more effective at lowering BP than increasing the dose of an existing drug.
- For most BP drugs, dose escalation means a doubling of dose, i.e. perindopril 4mg to 8mg, not 6 mg.
- Continue to escalate treatment if the target is not reached, subject to adverse events.
    - SBP =125 mmHg has not reached target (since the target is <125 mmHg) and BP-lowering treatment should be escalated.
- Patients with very high BP at baseline, or needing 4 drugs, should be investigated for secondary causes of hypertension.
- Two changes can be made at a clinic, e.g. add a second agent at the clinic, and increase the dose of an existing drug 2 weeks later. This will allow the target to be achieved faster.
- Do not routinely comment on BP levels or alter treatment in guideline patients. These patients are managed as per routine in the community by their GP. However, if the SBP is very high ($\geq$160 mmHg), as a duty of care, the patient should be asked to visit their GP soon to discuss their BP management; again, no change to their medication should be offered or prescribed.

General

- In general, reaching target for BP appears to be more challenging than for LDL-cholesterol. It is vital to positively escalate treatment, unless significant adverse events have appeared, at each visit, including adding new drugs and increasing the dose of existing drugs.
- The PODCAST group of patients can get confused easily so explain changes to drug therapy very carefully, ideally writing down what needs to be done.
- Let GPs know what is happening so that they do not over-rule, unnecessarily, treatment changes.

Intensive BP Treatment Algorithm



Legend for blood pressure lowering algorithm

A: Angiotensin converting enzyme inhibitor (ACE-I), e.g.
perindopril 2 mg od (range 2, 4, 8 mg od)
ramipril 2.5 mg od (range 1.25, 2.5, 5, 10 mg od)

A: Angiotensin receptor antagonist (ARA/ARB), e.g.
losartan 50 mg od (range 25, 50, 100 mg od)

B: ß-receptor antagonist (ß-RA), e.g.
atenolol 50 mg od (range 25, 50, 100 mg od)
bisoprolol 10 mg od (range 5, 10, 20 mg od)

C: Calcium channel blocker (CCB), e.g.
amlodipine 5 mg od (range 5, 10 mg od)
nifedipine MR/LA 20 or 30 mg od (range 20, 30, 40, 60 mg od)

D: Diuretic, e.g.
bendroflumethiazide 2.5 mg od (max 2.5 mg od)
frusemide 40 mg od (range 20, 40, 80 mg od)

M: Centrally active drug, e.g.
moxonidine 200 µg od (range 200, 400, 600 µg od)

K: Potassium-sparing diuretic, e.g.
spironolactone 25 mg od (range 12.5 mg to 200 mg daily)
amiloride 10 mg od (range 5-20mg od)

Z: Alpha-receptor antagonist, e.g.
doxazosin 4 mg od (then 8 mg od, max 16 mg od)