A Guide to Hypertension following NICE recommendations 2011

In August 2011 NICE changed some of its recommendations on the diagnosis and management of hypertension. This is meant to be an easy access guide to those changes to assist implementation in clinical practice.

Diagnosis

If the blood pressure is elevated above 140/90mmHg during the consultation then take a further reading, if this is widely different from the original reading take a third. Record the lower reading as the clinical blood pressure.

If the blood pressure is recorded as greater than 140 systolic or 90 diastolic arrange a 24 ambulatory blood pressure assessment (ABP). This should be set to take two readings an hour during the day and one reading an hour over night. The assessment should use the average of 14 reading taken during the day.

If someone cannot tolerate ABP then home readings should be used. When using home blood pressure monitoring to confirm a diagnosis of hypertension:

- -For each blood pressure recording, take two consecutive measurements, at least one minute apart and with the person seated
- -Record blood pressure twice daily, ideally in the morning and evening, and
- -Continue recording blood pressure for at least four days, ideally for seven days
- -Discard the measurements taken on the first day and use the average value of all the remaining measurements to confirm a diagnosis of hypertension.

While undertaking this assessment arrangements should be made for the following
- Urinary dip test for protein, sugar and blood
- U&E's, TFTs, Fasting blood glucose, Fasting lipids, cholesterol and HDL cholesterol
- ECG
- Cardiovascular risk assessment using the CVD risk calculator in SystmOne or Qrisk2

Intervention levels

Offer antihypertensive medication to people under 80 with ABP readings of between 135/85mmHg and 150/95mmHg (clinical reading of between 140/90mmHg and 160mmHg (Stage 1 Hypertension) and have one of:

- Target organ damage
- Established cardiovascular disease
- Renal disease
- Diabetes
- 10 year cardiovascular risk of greater than 20%

Offer antihypertensive medication to people of any age with ABP readings of over 150/95mmHg(clinical reading of over 160/100mmHg (Stage 2 Hypertension) irrespective of target organ damage or 10 year risk
In people under the age of 4 with Stage 1 Hypertension with no target organ damage, concomitant cardiovascular disease, renal disease or diabetes then referral to a specialist is recommended.

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Intervention

Lifestyle Modification

Weight loss via reduced fat and calorie diet
Regular dynamic physical exercise
Reduced use of salt in food preparation and elimination of salty foods
Increased fruit and vegetables intake
Limitation of alcohol consumption (<21u wk men and <14u week women)

For cardiovascular disease prevention

Stop smoking
Reduce total intake of saturated fat
Increase intake of oily fish
Regular physical exercise
If the cardiovascular 10 year risk is >20% then a statin is recommended (see Statin guidance)

Medication

Step 1

People under 55 years should be offered an ACE-I first (e.g. Ramipril) or if not tolerated an ARB (e.g. Losartan). Do not combine ACE-I and ARB
People over 55 years and black people of African or Caribbean family origin offer a calcium channel blocker (e.g. Amlodipine). If this is not suitable due to oedema or intolerance or there is evidence of LVSD or high risk of LVSD offer a Thiazide diuretic (Chlortalidone or indapamide). If taking bendroflumethiazide or hydrochlorothiazide with stable blood pressure these should be continued.

Step 2

Offer a calcium channel blocker (e.g. amlodipine)in combination with either and ACE-I or ARB
If a calcium channel blocker is not suitable (see above) offer a Thiazide diuretic (Chlortalidone or indapamide).

Step 3

If treatment with three dugs is needed this should be a combination of an ACE-I/ARB with a calcium channel blocker and a thiazide diuretic

Step 4 (Resistant Hypertension)

If the clinical blood pressure remains higher than 140/90mmHg despite being on 3 agents consider this to be resistant hypertension and consider a fourth antihypertensive agent (or seek expert advice). It is suggested that the process of next agents should be

- Spironolactone 25mg od (with potassium lower than 4.5mmol/l)
- Higher dose thiazide diuretic (with potassium higher than 4.5mmol/l)
- Alpha Blocker (e.g. doxazosin)
- Beta Blocker (e.g. bisoprolol)

At this point expert advice should be taken if the clinical blood pressure is greater than 140/90mmHg

Monitoring Intervention

Use clinical blood pressure measurements to assess response to intervention
In people with 'White Coat' effect i.e. a discrepancy of over 20/10mmHg between clinic and average daytime ABP or Home readings at diagnosis consider ABP or Home readings as an adjunct to monitoring response

Blood Pressure Targets

In people under 80 years a clinical blood pressure of below 140/80mmHg is recommended
In people over 80 years a clinical blood pressure of below 150/90 mmHg is recommended

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