

Treatment for moderately high blood pressure may be best saved for those at high risk

The largest study yet of people with mild hypertension shows that medical treatment may not be worthwhile in those at low risk of heart attack and stroke.

Key messages

This study provided no evidence to suggest that new US hypertension guidelines will reduce CVD events in low-risk patients with mild hypertension. Furthermore, the researchers found that long-term antihypertensive treatment in clinical practice was associated with harm attributable to adverse events, such as hypotension, syncope, electrolyte abnormalities, and acute kidney injury.

Therefore:

- ➔ doctors should be cautious when initiating new pharmacologic treatment in people with blood pressure of 140/90-159/99 mm Hg without risk factors;
- ➔ patients should be made aware of the limited evidence of efficacy for treatment in low-risk individuals.

Expert comment

“Smoking cessation, diet and exercise can all reduce blood pressure and reduce mortality without using drugs”, said Dr Amrit Takhar, GP and Clinical Lead Cardiology, Cambridgeshire and Peterborough CCG.

Why this research was needed

Thresholds for the initiation of pharmacologic treatment of hypertension vary worldwide, affecting millions of people. Yet the evidence on starting pharmacologic treatment in low-risk patients with mild hypertension has remained inconclusive.

US guidelines now recommend that pharmacologic treatment is initiated in high-risk patients with a blood pressure of 130/80 mm Hg or higher and for all individuals with a blood pressure of 140/90 mm Hg or higher, regardless of risk. This contrasts with the situation in the UK where the thresholds for initiating medication remain higher.

The research team for this study of hypertension, which was led from Oxford, included Professor Jonathan Mant, head of the Primary Care Unit and Director of the Cardiovascular Research Group. [Cardiovascular research at the Primary Care Unit](#) is focused on prevention, diagnosis and the management of patients with cardiovascular disease.

What did the researchers do?

This research used retrospective data from the Clinical Practice Research Datalink.

Researchers used the data to examine whether antihypertensive treatment is associated with a low risk of mortality and cardiovascular disease (CVD) in low-risk patients with mild hypertension (blood pressure of 140/90-159/99 mm Hg).

They compared rates of mortality and CVD between patients prescribed treatment and those not prescribed treatment.

Data for 38 286 low-risk patients with mild hypertension (untreated blood pressure of 140/90-159/99 mm Hg) was analysed.

What did the research find?

No evidence of an association between exposure to antihypertensive treatment and mortality or cardiovascular disease was found.

There was evidence that treatment may be associated with an increased risk of adverse events, such as hypotension, syncope, and acute kidney injury.

The data used in this study may be subject to bias from unmeasured confounding – for example, researchers did not know whether patients prescribed antihypertensive medication actually took it.

Even so, the data suggest caution when considering treatment in low-risk patients with mild hypertension.

Read the research

December 2018. [Benefits and Harms of Antihypertensive Treatment in Low-Risk Patients With Mild Hypertension](#). J Sheppard, S Stevens, R Stevens, U Martin, J Mant, R Hobbs, R McManus. JAMA Internal Medicine

See current NICE clinical guideline

Hypertension in adults: diagnosis and management: [Clinical guideline \[CG127\]](#)

Learn more

The [2019 NICE draft guideline on diagnosis and management of hypertension in adults](#) in the UK cites this study as justification for not following guidelines in the US, while recommending treatment for patients with a lower CVD risk than before, partly in contrast to the findings of this work.

If approved, the new NICE guidelines would increase the number of patients eligible for treatment by UK GPs in the future.