

Hypertension (2019)

Overview

Key points

Acupuncture may be as effective as medication in reducing high blood pressure and acupuncture in combination with medication is more effective than medication alone (Tan 2019; Zhao 2019; Chen 2018; Yang 2018; Leem 2016; Xiong 2014)

Background

Hypertension is a major risk factor for stroke (both ischaemic and haemorrhagic), myocardial infarction, heart failure, chronic kidney disease, peripheral vascular disease, cognitive decline and premature death worldwide. (Kearney 2005) If the condition is untreated, there is a progressive rise in blood pressure, which often results in a treatment resistant state due to vascular and renal damage (itself caused by the untreated hypertension). (NICE 2011) Treatments include lifestyle changes and anti-hypertensive medication, although these are associated with poor compliance and side effects, respectively (Chen 2018).

Several systematic reviews of studies of acupuncture for hypertension suggest that it may reduce blood pressure:

Systematic Reviews

- A meta-analysis of 31 studies (n=2,649) of several interventions for hypertension, such as acupuncture, moxibustion and medication, found that there was no significant difference between acupuncture and medication in terms of reducing systolic blood pressure (SBP). Moxibustion may reduce diastolic blood pressure (DBP) to a greater extent than acupuncture (Tan 2019).
- 15 systematic reviews of variable quality and 91 studies were included in an analysis (n=7,627) which showed that true acupuncture plus medication improved SBP and DBP more than sham acupuncture plus medication (Zhao 2019).
- A total of 30 randomised controlled trials (RCTs) involving 2,107 patients were included in a meta-analysis to assess acupuncture for hypertension. Acupuncture in combination with medication was better than medication alone or sham acupuncture in combination with medication in reducing SBP and DBP (Chen 2018).
- A 2016 systematic review of 10 trials showed that acupuncture combined with medication had a greater efficacy rate than medication alone (Leem 2016).

- Five studies of moxibustion showed that it reduced blood pressure to a similar extent to medication and in combination with anti-hypertensive medication it significantly reduced SBP ($P < 0.00001$) and DBP ($P < 0.00001$) compared with medication alone (Xiong 2014).
- A Cochrane Review of 22 RCTs ($n = 1,744$) required the blood pressure-lowering effects of acupuncture to be sustained from 7 days to 1 month after treatment finished to be considered as a treatment for chronic hypertension. Current studies could not support this, although in the short-term reductions with acupuncture were superior to those seen with anti-hypertensive drugs. The authors believed that there was a high risk of bias in the acupuncture studies (Yang 2018).

Clinical trials

- In one recent trial, patients with mild hypertension were randomized to receive 18 sessions of affected meridian acupuncture ($n = 107$), non-affected meridian acupuncture ($n = 107$), sham acupuncture ($n = 107$) during 6 weeks, or to stay in a waiting-list control ($n = 107$). At week 9, acupuncture decreased SBP in patients with stage I hypertension by nearly 8 mm Hg acupuncture and was superior to sham acupuncture (adjusted mean difference 3.3 mm Hg, $P = 0.035$) and waiting-list control (4.8 mm Hg, $P < 0.001$). Reductions in SBP with acupuncture were sustained for a further 6 weeks (Zheng 2019).
- An RCT to assess the effects of abdominal and auricular acupuncture ($n = 400$) in people with and without obesity who were not receiving any anti-hypertensive medication found that abdominal acupuncture reduced SBP and DBP compared with sham acupuncture at week 6. Auricular acupuncture, however, resulted in short-term increases in blood pressure (Abdi 2017).

References

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