HOT OFF THE PRESS: CLINICAL

Antihypertensive treatment may reduce the risk for cognitive impairment and dementia

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The association of hypertension and dementia and future cognitive impairment is well recognized. While some studies suggest that antihypertensive treatment can reduce this risk, other studies report no reduced risk for developing neurocognitive disorders by blood pressure lowering drug treatment. With an ageing population, and considering the high prevalence of hypertension in the general population, clarifying this issue of high clinical importance.

Recently, Hughes and collaborators reported on a systematic literature review and meta-analysis of the association of blood pressure lowering with dementia and cognitive impairment¹. The authors accepted to include published randomized clinical trials up to 2019 (included), where antihypertensive medication and a control (placebo, other drug or less intensive drug treatment) were compared in more than 1000 participants, with a follow up of at least one year, and reporting appropriate outcomes. The primary outcome was dementia or cognitive impairment. The authors eventually included 12 studies with 92 135 participants in their results on the primary outcome (two additional studies were included for the reporting of secondary outcomes only). Mean age was 69 years, 42% women, mean blood pressure 154/83 mm Hg, and mean follow up was 4.1 years. A majority of the studies represented primary prevention, and a majority were placebo controlled.

Dementia or cognitive decline was diagnosed in a total of 5550 participants, corresponding to 7.0% of the actively treated group, as compared to 7.9% the control group (odds ratio and 95% confidence interval 0.93; 0.88–0.98). As for secondary outcomes, similar findings were observed for cognitive decline (0.93; 0.88–0.99), while change in cognitive score was insignificant.

Thus, the results of this study¹ extend earlier meta-analyses based on fewer studies²⁻⁴ and suggest a modest but significant association between antihypertensive drug treatment and lower risk for dementia or cognitive decline. The risk reduction is smaller, and the time lag for the benefit appears to be longer, than what has been observed for stroke prevention. The association of hypertension and dementia and future cognitive impairment is stronger for hypertension in mid-life than for hypertension in later life. This may suggest that starting antihypertensive treatment early is of particular benefit in order to prevent neurocognitive decline. However, mean age in the current analysis was 69 years at study start, pointing to a benefit also when starting treatment in older patients. To demonstrate smaller changes in cognitive decline (i.e. changes in cognitive score but no major symptoms) will probably require large studies with much longer follow up. That said, the results of his study are encouraging and provide further support to offer more people with an elevated blood pressure antihypertensive treatment for prevention of future disease.

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