



Schweizerische Hypertonie-Gesellschaft
Société Suisse d'Hypertension
Società Svizzera d'Ipertensione
Swiss Society of Hypertension

Hot from the hypertensive press

Short analysis of clinical studies that may change our practices in the field of hypertension
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Given the risk of recurrence of stroke or myocardial infarction, is there a role for preferential antihypertensive pharmacotherapy?

There is a widespread consensus from numerous clinical trials, that BP decrease is the main driver of risk reduction in hypertension treatment. However, some drug classes appear to better outcomes in specific setting such as stroke or coronary heart disease [1] [2]. Therefore, prediction of the most probable future event is useful in tailoring antihypertensive treatment. Patient history is a key tool for this prediction, as shown by Böhm et al [3].

In a recent study [3], which assessed pooled data from the ONTARGET and TRANSCEND studies, the authors analyzed outcome data from high-risk patients over 55 years old with a history of cardiovascular events or proven cardiovascular disease in a non-prespecified post hoc analysis. The median follow-up was 56 months. The patients were grouped according to their index event in groups without myocardial infarction (MI) and without stroke (-/-; n=10956), MI but no stroke (+/-; n=13487), no MI but stroke (-/+; n=4985) or MI and stroke (+/+; n=1509).

Patients with MI as index event (+/-) had a higher risk to experience a second MI [hazard ratio 1.42 (confidence interval (CI) 1.20–1.69)] compared with patients with no events (-/-) but no increased risk for a stroke as a next event. Patients with a stroke history (-/+) had a roughly three-fold higher likelihood to experience a second stroke [hazard ratio 2.89 (CI 2.37–3.53) P<0.0001] but not MI. After MI and stroke (+/+) the risk for subsequent events and cardiovascular death was increased over the whole SBP spectrum. As shown in the above-mentioned study, previous MI and previous stroke are associated with increased risk for the same event in the future, independent of achieved SBP. Thus, consideration of patient history might help in tailoring antihypertensive therapy.

1. Thomopoulos, C., G. Parati, and A. Zanchetti, *Effects of blood pressure-lowering on outcome incidence in hypertension: 5. Head-to-head comparisons of various classes of antihypertensive drugs - overview and meta-analyses*. J Hypertens, 2015. **33**(7): p. 1321-41.
2. Verdecchia, P., et al., *Angiotensin-converting enzyme inhibitors and calcium channel blockers for coronary heart disease and stroke prevention*. Hypertension, 2005. **46**(2): p. 386-92.
3. Bohm, M., et al., *Cardiovascular outcomes in patients at high cardiovascular risk with previous myocardial infarction or stroke*. J Hypertens, 2021. **39**(8): p. 1602-1610.

Dr. med. Roman Brenner, Swiss Society of Hypertension

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