Angiotensin Receptor Blockers and Stroke Therapy

It Is All About the Blood Pressure

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Blood pressure remains the single most important modifiable risk factor for primary and secondary stroke prevention. There have been endless arguments about the possibility of specific class effects for stroke prevention with much of this debate focused on various mechanisms of blockade of the renin–angiotensin system versus the generic effect of blood pressure-lowering. As indicated by the eloquent arguments put forward by both our protagonists, a reasonable case can be made for either point of view.

Let us briefly look at the big picture; first, primary prevention. There is overwhelming epidemiological evidence of the strong relationship between the risk of vascular events and blood pressure without a definite lower limit and this applies to both primary and secondary stroke prevention.1–3 Although some individual trials suggest a class effect not explained purely by the extent of blood pressure reduction, a recent meta-analysis of 31 trials involving 190,000 patients showed a lack of effect of drug class on major cardiovascular events.4 In another recent meta-analysis in which angiotensin-converting enzyme inhibitors and angiotensin receptor blockers were specifically compared, there were similar blood pressure-dependent effects for stroke prevention.5

For secondary prevention, the current evidence supports the use of angiotensin-converting enzyme inhibitors, ideally in combination with diuretics, as first-line therapy.3,6 It is likely that angiotensin receptor blockers have a similar benefit, but the evidence is less compelling.7,8 We would generally use angiotensin receptor blockers in angiotensin-converting enzyme inhibitor-intolerant patients due to their lower rate of side effects, particularly cough.

The even bigger picture is the need to put this debate into the package of proven risk reduction for stroke. These include management of lifestyle factors and, for secondary prevention, discharge from the hospital on a combination of blood pressure-lowering, statin, and antiplatelet agent.

Disclosures

None.

References


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