Letters and Replies

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Targets of blood pressure

Sir,

In the editorial of Volpe and Tocci [1], the lack of achievement of blood pressure targets (<140/90 mmHg in the general population and <130/80 mmHg in high-risk patients) is described. As a possible reason for poor blood pressure control, physicians’ lack of knowledge of the guidelines is suspected. However, maybe not a lack of knowledge but a very good knowledge of the data and the limitations of the available RCTs might be the reason why these blood pressure targets are not implemented. Especially in three groups of patients, low blood pressure targets might increase the risk for ischaemic heart disease and renal failure:

1. Patients with coronary heart disease: as mentioned in the editorial, these are mostly elderly patients. It has been shown that already in early stages of kidney dysfunction, the risk of coronary heart disease is increasing. A diastolic blood pressure <70 mmHg is associated with an increased risk for myocardial infarction [2].

2. Elderly patients: the benefit of lowering blood pressure is evident in patients with renal insufficiency, but age >70 years has been an exclusion criteria in many of the studies. In patients with proteinuria, the recommendation for a blood pressure goal <130/80 is based mainly on the MDRD study. In this study, mean arterial pressure of 92 mmHg was a target only in patients <60 years of age [3].

3. Ischaemic and advanced kidney disease: in patients with advanced kidney disease, discontinuation of inhibitors of the renin-angiotensin-aldosterone system can improve kidney function [4].

We should keep in mind that in many studies, the measured systolic blood pressure was higher than the blood pressure target (for example in IRMA the Irbesartan in patients with type 2 diabetes and microalbuminuria study, the target was 135/85 mmHg, the achieved blood pressure was 141–143/85 mmHg) [5].

Unfortunately, simplification of the blood pressure control guidelines will be difficult. The blood pressure targets have to be individualized to achieve the best risk reduction for cardiovascular disease and renal function.

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Reply

Sir,

We read with interest the comments by Dr Liebl on our article, entitled ‘Rethinking targets of blood pressure (BP) and guidelines for hypertension clinical management’. In his letter, Dr Liebl suggests an alternative interpretation for unsatisfactory BP control, that is the limitations of randomized controlled clinical trials in hypertension, rather than lack of knowledge and implementation of evidence derived from these trials by physicians in their management of hypertensive patients.

While we agree that simplification of BP guidelines may not necessarily and directly translate into better BP control in treated hypertensive patients [1] and that BP-lowering strategies might be tailored to each individual hypertensive patient [2,3], several aspects deserve discussion.

The lessons learned from clinical trials in high-risk hypertensive patients, such as elderly individuals and patients with coronary artery disease or renal failure, have prompted a definite commitment to revise the recommendations for the clinical behaviour and the suggested BP targets in these categories of hypertensive patients [4]. A recent expert-driven position paper of reappraisal of the 2007 European guidelines on hypertension has, indeed, proposed to reconsider the BP targets to be achieved in these high-risk patients [5]. Excessive BP reduction may, in fact, impair regional blood flow autoregulation, which is of vital importance, mostly in the coronary circulation, and this can be the case in patients with undiagnosed coronary disease, as well as in those with diabetes, renal disease or cerebrovascular disease (i.e. elderly patients with isolated systolic hypertension).

What we mean in our article is to aim at levels of BP < 140/90 mmHg in all hypertensive patients. We also recommend