



# Blood Pressure Control and Clinical Outcomes in Acute Intracerebral Haemorrhage: A Preplanned Pooled Analysis of Individual Participant Data

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To the Editor:

We have carefully read the study by Moullaali et al. (2) on “Blood pressure control and clinical outcomes in acute intracerebral haemorrhage: a preplanned pooled analysis of individual participant data” (2). Stroke is a serious public health problem (1,3,5), and the second leading cause of mortality worldwide (1), next to rabies. At present, 15 million people suffer stroke worldwide each year (1, 5), and spontaneous intracerebral hemorrhage (ICH) accounts for approximately 10%–15% of all strokes (5). ICH is one of the complications of hypertension (4). Elevated blood pressure (BP) is closely related to hematoma expansion and poor outcome after acute ICH (3). Hence, early BP treatment may be good after ICH (3). We are very interested in the BP regulation strategies mentioned in their study as there are benefits to achieving early and smooth control of systolic BP potentially to levels as low as 120–130 mmHg in adults who have been admitted to the hospital with mild to moderate acute ICH (2). In addition, meta-analysis by our team draws very similar conclusions; however, our research is still under review.

The study by Moullaali et al. is very meaningful, which may provide obvious guidance for our clinical work and research. However, the following problems in this study have been bothering us: *Question 1:* What is the method to evaluate moderate to mild severity of acute ICH? *Question 2:* To achieve the target systolic BP, a range of intravenous and/or oral antihypertensive agents were used for patients with acute ICH. The magnitude of the decrease in systolic BP and the doses and the routes of administration of these antihypertensive drugs are different; hence how do we eliminate the related effects (the effect on the incidence of adverse events and the effect of antihypertensive drugs on prognosis) caused by these differences? and *Question 3:* During the experiment, the patients

who exhibited treatment-related symptomatic hypotension after administration of antihypertensive drugs, seemed to continue to be included in the study. Hence, how do we eliminate the related effects of hypotension (effect on the incidence of adverse events and prognosis)? And if these effects are not eliminated, should the hypotension-related complications be included as adverse events? The clinical significance of the study by Moullaali et al. would be greatly enhanced if the above problems are solved.

We are most appreciative of the efforts of Moullaali et al. (2). Their study helps us to re-recognize the importance of BP strategies for patients with acute ICH. The potential benefits of BP management in patients with acute ICH warrant further clarification.

## REFERENCES

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