Inadequate BP control linked with increased risk of recurrence of intracerebral hemorrhage

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Survivors of an intracerebral hemorrhage (ICH; a type of hemorrhagic stroke in which bleeding occurs directly into the brain) who had inadequate blood pressure (BP) control during follow-up had a higher risk of ICH recurrence, with this association appearing stronger with worsening severity of hypertension, according to a study in the September 1 issue of *JAMA*.

Intracerebral hemorrhage is the most severe and least treatable form of stroke, respon¬sible for almost 50 percent of stroke-related illness and death. Intracerebral hemorrhage survivors are at high risk for recurrent ICH, death, and worsening disability. Preliminary evidence from another study suggested that BP lowering reduces incidence of ICH, according to background information in the study.

Jonathan Rosand, M.D., M.Sc., of Massachusetts General Hospital, Boston, and colleagues sought to determine whether BP reduc¬tion and control are associated with risk of recurrence of lobar (a particular region of the brain) or nonlobar ICH. The study included 1,145 patients with ICH who survived at least 90 days and were followed up through December 2013 (median follow-up of 37 months). Blood pressure measurements were obtained at 3, 6, 9, and 12 months, and every 6 months thereafter from medical personnel or patient self-report.

There were 102 recurrent ICH events among 505 survivors of lobar ICH

and 44 recurrent ICH events among 640 survivors of nonlobar ICH. During follow-up, adequate BP control (based on American Heart Association/American Stroke Association recommendations) was achieved on at least 1 measurement by 625 patients (55 percent of total) and consistently (i.e., at all available time points) by 495 patients (43 percent of total). The researchers found that the ICH event rate for lobar and nonlobar ICH was higher among patients with inadequate BP control compared with patients with adequate BP control. Analyses indicated that inadequate BP control was associated with higher risk of recurrence of both lobar and nonlobar ICH. The association between el¬evated BP and ICH recurrence appeared to become stronger with worsening severity of hypertension.

Systolic BP during follow-up was associated with increased risk of both lobar and nonlobar ICH recurrence. Diastolic BP was associated with increased risk of nonlobar ICH recurrence, but not with lobar ICH recurrence.

"These results confirm that ICH survivors are at high risk for re¬currence and support the hypothesis that aggressive blood pressure control may reduce this risk substantially," the authors write. They add that the findings suggest that randomized clinical trials are needed to address the ben¬efits and risks of stricter BP control in ICH survivors.

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