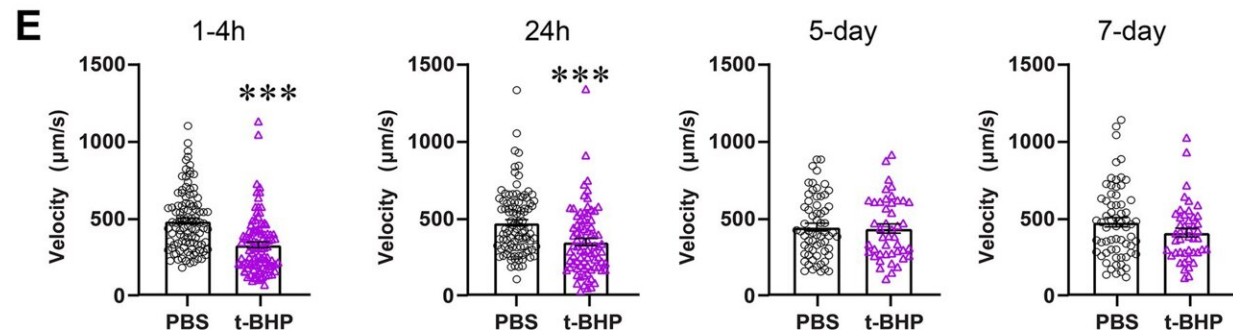
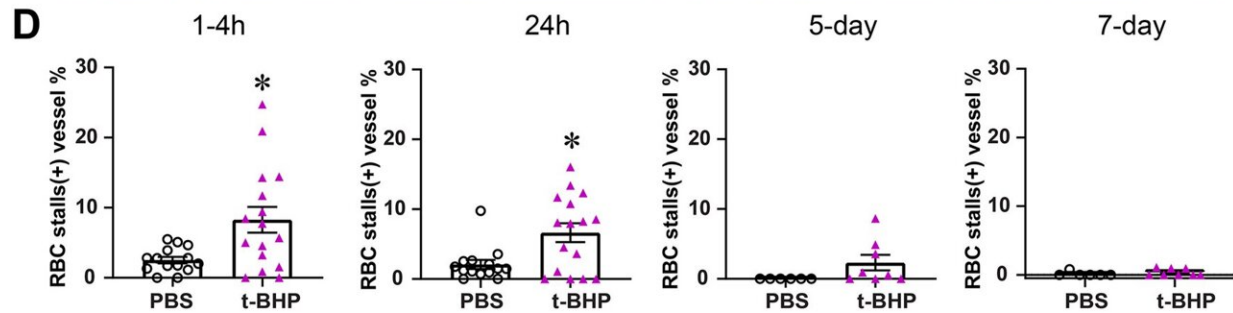
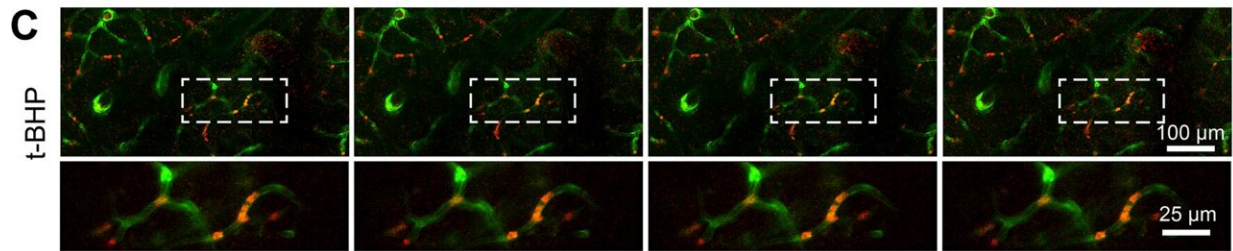
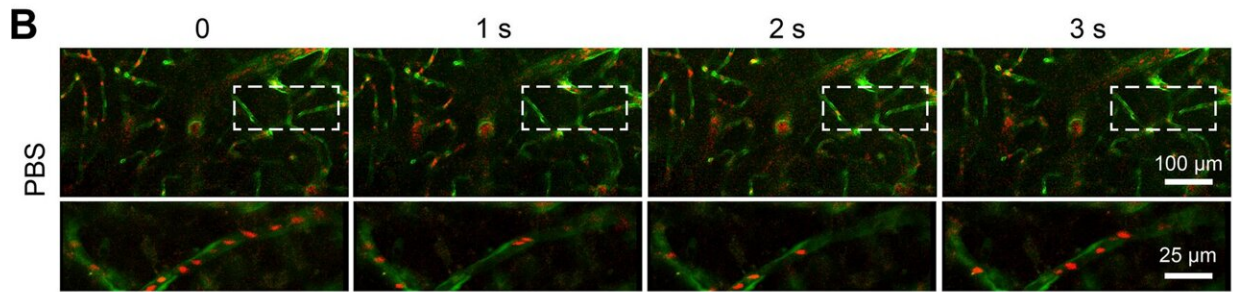
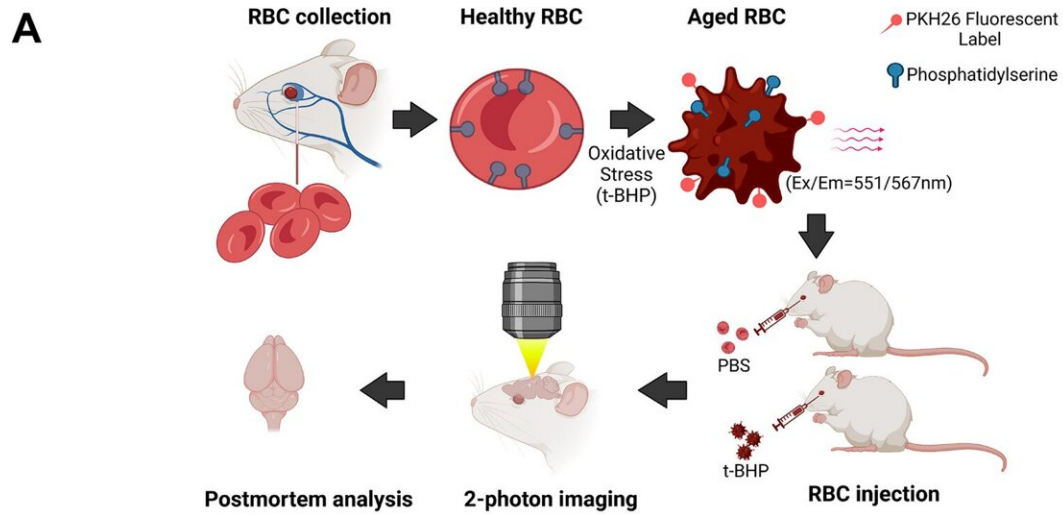


New study is first to find brain hemorrhage cause other than injured blood vessels

November 20 2023



t-BHP-treated RBC stall in cerebral blood vessels and impair cerebral blood flow velocity shown by in vivo high-resolution two-photon imaging in mice.

Schematic of the experimental design (A). RBC were collected from FVB/NJ mice, treated with control PBS or the oxidative stressor t-BHP, then labeled with the PKH26 fluorescent dye and injected intravenously into mice with Tie2-GFP-labeled endothelial vasculature. RBC (red) and cerebral blood vessels (green) were imaged in vivo using two-photon microscopy. Representative frames are shown at 1-s interval durations from control PBS-treated RBC-injected mice (B) and t-BHP-treated RBC-injected mice (C). The boxed areas are shown in the bottom panels of B and C, imaged at higher resolution and at different second intervals from parent images. RBC from the control PBS group exhibit robust flow in the cerebral blood vessels. In contrast, t-BHP-treated RBC stall significantly in cerebral blood vessels. Percentage of cerebral blood vessels with stalled RBC (D) and blood flow velocity (E) were measured at 1–4 h, 24 h, 5 days and 7 days after control versus t-BHP-treated RBC injections. Significantly more RBC stalls and reduced cerebral blood flow velocity are measured in mice injected with t-BHP-treated RBC relative to control PBS-treated RBC. Data are expressed at mean \pm SEM and statistically analyzed with the LME. *p

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