Supplemental Figure 1. Systemic physiological changes

Left: Weekly non-invasive measurements in SHRSP showed a progressive increase in systolic and diastolic blood pressures (BP) on high-salt Japanese permissive diet (JPD), while control SHRSP on regular diet (RD) had stable BP. The SHRSP body weights started to progressively decrease 2 weeks after JPD, but continued to increase on RD. Right common carotid artery ligation (RCCAO) did not significantly alter the systemic physiological response to JPD. *$p<0.05$ vs. baseline (B) in JPD and RCCAO+JPD. †$p<0.05$ JPD vs. RD. ‡$p<0.05$ RCCAO+JPD vs. RD. §$p<0.05$ vs. baseline (B) in JPD. ¶$p<0.05$ vs. baseline. Two-way ANOVA for repeated measures followed by Dunnett's multiple comparisons test.

Right: Reversal by switching to RD and starting antihypertensive treatment (AntiHTN) brought an immediate drop in BPs to below baseline levels and restored body weights. One-way ANOVA for repeated measures followed by Holm-Sidak's multiple comparisons test.

Supplemental Figure 2. Spatial distribution (heat map) of T2 hyperintensities at the onset of neurological signs.

Data are cumulative from all animals.

Supplemental Figure 3. Routine histopathology

A representative hematoxylin/eosin-stained cryosection showing cells with eosinophilic cytoplasm and pyknotic nuclei (arrowheads) on a background of staining pallor reflecting vasogenic edema (dashed outline) in a T2-bright cortical watershed lesion in an SHRSP on high-salt diet.

Supplemental Figure 4. Systemic physiological changes in SHR on high-salt diet

The time course of systolic and diastolic blood pressures (BP), heart rate and body weight are shown before and 3-4 weeks after high-salt diet (JPD) and right common carotid artery ligation. The BP and heart rate after JPD did not statistically differ from SHRSP with right common carotid artery ligation shown in Figure 2. In contrast, SHR continued to gain weight after the onset of high-salt diet (JPD) and right common carotid artery ligation. N=5; *$p<0.05$ vs. baseline; one-way ANOVA for repeated measures followed by Dunnett's multiple comparisons test.

Supplemental Figure 5. Peripheral blood smear.

Presence of schistocytes (arrowheads) suggests a thrombotic microangiopathic process in SHRSP on high-salt diet.

Supplemental Figure 6. Red blood cell deformability.

There was no change in RBC deformability as measured by transit velocity through microfluidic channels. One-way ANOVA for repeated measures.

Supplementary movie. “Seizure-like” episode

Rhythmic movement of the left forepaw during symptomatic phase in a SHRSP under hypersalted diet.