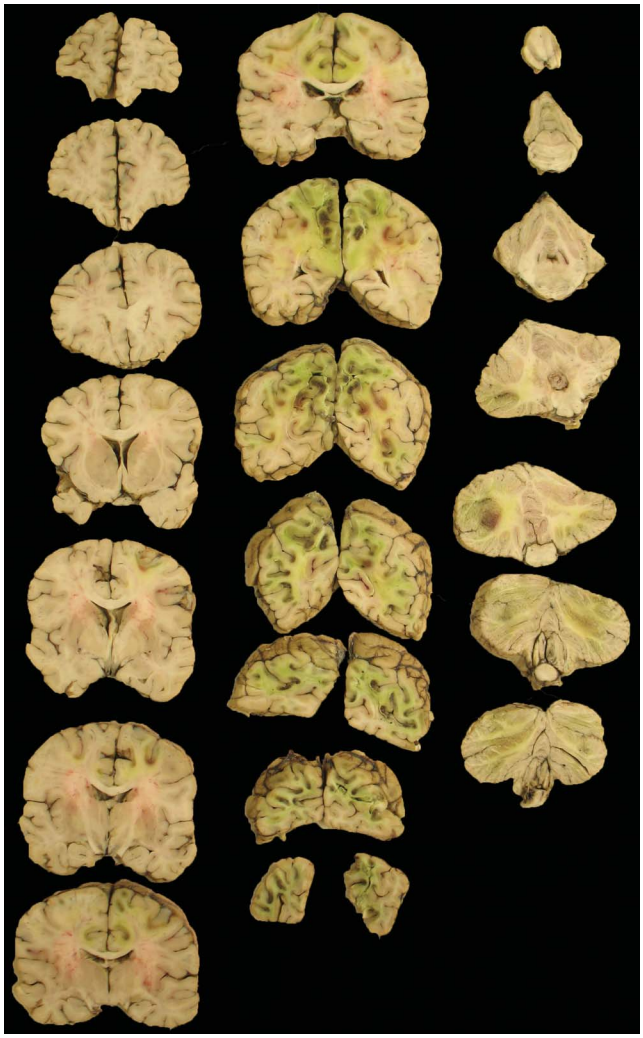
Bilirubin labeling of borderzone and anterior cerebral artery territory infarction

Figure Bilirubin-stained areas of infarction in borderzone regions (ACA-MCA, MCA-PCA, and AICA-PICA) and bilateral posterior ACA territories



A 50-year-old woman developed multiorgan system failure secondary to sepsis. She became obtunded during a period of hypotension, and cranial CT demonstrated diffuse borderzone infarction. Brain autopsy revealed green pigmentation in areas of infarction due to vascular leakage of bilirubin at sites of blood–brain barrier disruption, mapping the borderzone regions and bilateral posterior anterior cerebral artery (ACA) territories with this endogenous label (total bilirubin at time of death was 24 mg/dL; direct bilirubin was 19 mg/dL; ACA infarction was not present on the initial CT, and was thought to be secondary to herniation) (figure). This brain–liver association evokes the first description of pathology in the borderzone regions in 1883 by Samuel-Jean Pozzi,[1] who attributed the lesions to cortical "cirrhosis."

Aaron L. Berkowitz, MD, PhD, Shu-Hsien Sheu, MD, PhD, Matthew F. Rose, MD, PhD, Ivana Delalle, MD, PhD, Rebecca D. Folkerth, MD

From Brigham and Women's Hospital, Boston, MA.

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Correspondence to Dr. Berkowitz: Aberkowitz3@partners.org

1. Pozzi S. Sur un cas de cirrhose atrophique granuleuse disséminée de circonvolutions cérébrales. Encéphale 1883;3:155–177.

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