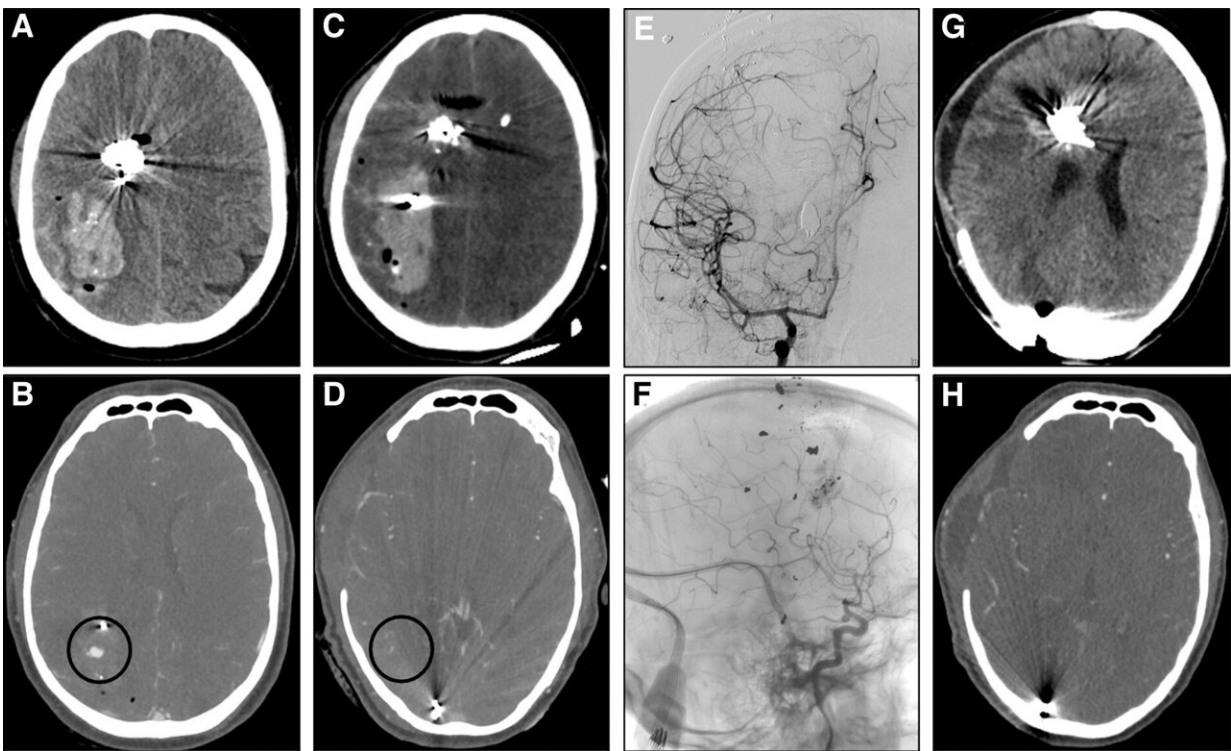


Study investigates acute pseudoaneurysms following head gunshot wounds

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A 54-year-old man sustained a right temporal gunshot wound to the head (GSWH). His post-resuscitation Glasgow Coma Scale (GCS) score was 14 and his pupils were reactive with left hemiparesis. Computed tomographic angiography (CTA) was obtained within 1 h from initial injury. Credit: *Journal of Neurotrauma* (2024). DOI: 10.1089/neu.2023.0576

A new [study](#) in the *Journal of Neurotrauma* contends that a significant fraction of traumatic intracranial aneurysms (TICAs) is missed on initial contrasted scans of patients suffering a civilian gunshot wound to the head (cGSWH). The study was designed to characterize acute TICAs using admission CT angiography (aCTA).

The study showed that the presence of an intracerebral [hematoma](#) was the main predictor of TICA in cGSWH. Larger intracerebral hematomas in patients with cGSWH suggest hidden TICAs.

"When CTA was performed acutely, TICAs were ten times more frequent in cGSWH compared to [what was reported in the] previous literature, and more likely to proceed to [surgery](#)," stated Riccardo Serra, MD, from the University of Maryland, and co-authors of the study.

"This study provides first evidence of early incidence of traumatic aneurysms after GSW to the head," concluded the investigators.

"TICAs may arise in up to 20% of patients in the hours immediately after the [injury](#), are associated with intracerebral hematomas, and predict neurosurgical intervention. Spontaneous resolution on repeat vascular imaging occurs in approximately 40% of the patients that survive the initial injury."

"These results from the very early hours after injury challenge the [conventional wisdom](#) about the incidence and natural history of TICAs in cGSWH patients," says Alex Valadka, MD, Deputy Editor of *Journal of Neurotrauma*, from the University of Texas Southwestern Medical Center.

More information: Riccardo Serra et al, Acute Development of

Traumatic Intracranial Aneurysms After Civilian Gunshot Wounds to the Head, *Journal of Neurotrauma* (2024). [DOI: 10.1089/neu.2023.0576](https://doi.org/10.1089/neu.2023.0576)

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