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Acute Stroke Imaging in Transfer Patients Who Received Recent Intravenous Iodinated Contrast at an Outside Facility: An Unrecognized Problem That Deserves More Attention

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Acute Stroke Imaging in Transfer Patients Who Received Recent Intravenous Iodinated Contrast at an Outside Facility: An Unrecognized Problem That Deserves More Attention

We read with great interest the recent article by Copelan et al¹ titled, “Recent Administration of Iodinated Contrast Renders Core Infarct Estimation Inaccurate Using RAPID Software.” In a cohort of patients with acute stroke who received recent intravenous iodinated contrast as part of another imaging study, the authors demonstrated that the rapid processing of perfusion and diffusion (RAPID; iSchemaView) CTP platform may underestimate the core infarct size. This article importantly highlights inherent challenges present in interpreting scans for patients with acute stroke transferred from outside facilities who underwent recent CT imaging with iodinated contrast.

We experienced a different challenge while interpreting scans for transferred patients with stroke who also received recent iodinated contrast at the outside facility.² We observed parenchymal hyperdensities, likely related to contrast enhancement of acute infarcts. These parenchymal hyperdensities limited our ability to confidently exclude intracranial hemorrhage, and we described using dual-layer spectral imaging to address this problem. Nevertheless, these challenges collectively bring to light the phenomenon of recent intravenous contrast administration hindering interpretation of acute stroke examinations after a patient’s arrival to a tertiary care center for potential mechanical thrombectomy. Despite this, sparse literature exists to investigate these issues. As the authors have shown that recent contrast administration may underestimate the core infarct size with the RAPID software, we

postulate that a similar phenomenon may result in overestimation of the calculated ASPECTS.

Evaluation for intracranial hemorrhage, ASPECTS decay, and perfusion abnormalities is paramount for appropriate patient selection for mechanical thrombectomy after interfacility transfer. Administration of contrast material at the first facility may limit this ability at the recipient facility. We thank the authors for their important work, and we feel that additional studies are essential to address these issues.


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