with intravenous tissue plasminogen activator (tPA) is often the first-line therapy after presentation. For select patients with large vessel occlusions (LVO), mechanical thrombectomy (MT) is the gold standard to achieve cerebral reperfusion, in which a variety of clot retriever devices and aspiration catheters are employed to remove the clot. After MT, a computed tomography (CT) scan of the head is often done shortly after to evaluate for stroke progression and hemorrhagic transformation; however, in some patients, contrast can remain within the parenchyma of the brain, referred to as contrast staining (CS). While an unclear radiologic finding, previous studies have suggested that it represents injury to small vessels branching from the occluded vessel during thrombectomy (Renu et al. Stroke. 2014). As a result, CS has been associated with a higher risk intracerebral hemorrhage (ICH) after MT.

**Objective** In this study, we look to (1) better characterize the clinical significance of post-MT CS in our cohort of acute ischemic stroke patients and (2) determine whether specific devices deployed at the time of thrombectomy are correlated with CS.

**Methods** We retrospectively reviewed patients from 2017-2020 who underwent MT. Included patients were those that presented with a LVO (i.e. clot within the internal carotid artery, proximal anterior cerebral artery, proximal middle cerebral artery, vertebrobasilar artery) and underwent MT within 24 hours of symptom onset. Patients that had vessel occlusions related to prior surgical or endovascular procedures were excluded. Clinical outcomes were reported with the modified Rankin Scale (mRS).

**Results** Patients with CS were diagnosed with early ICH (diagnosed within 24 hours after MT) more often that patients without CS (59% vs 18%, respectively; p < 0.001). The groups did not differ in late ICH (diagnosed after 24 hours). Patients with symptomatic ICH had higher mRS at discharge (median of 5 vs 3, respectively; p = 0.02). However, CS was not independently associated with worsened mRS after MT (p = 0.47). In addition, larger diameter clot retriever devices and catheters were not significantly correlated with the presence of contrast staining or development of symptomatic ICH.

**Conclusion** Contrast staining is associated with the development of ICH, particularly in the early period after MT and worse clinical outcomes. While patients with ICH had worse functional outcomes at discharge, contrast staining itself was not associated with worse outcomes. Lastly, larger diameter clot retriever devices and catheters were not significantly correlated with the presence of contrast staining.

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