



ACUTE STROKE CT/CTA PROTOCOL

ADVANCED CARE OF PATIENTS WITH CEREBROVASCULAR DISEASE

Background

Given advances in endovascular therapy in eligible patients with acute ischemic stroke, and the time-dependent nature of optimizing outcomes after stroke, there is an urgent need to revise the workflow of acute stroke workup. A rapid CT angiography (CTA) of the head and neck should accompany the initial CT in acute stroke patients in order to identify those patients with large vessel occlusions who would be candidates for endovascular therapy. *According to the newly published guidelines from the AHA/ASA (acute stroke management guidelines, 2018), **CTA head and neck** should be performed within 20 minutes of arrival to ED in at least 50% of thrombolytic or thrombectomy eligible patients.* We note that the majority of stroke patients already obtain vascular imaging during hospitalization, even if not candidates for endovascular therapy. Thus, this protocol only shifts into the acute evaluation time period imaging that would otherwise occur in many patients during the hospital stay.

Criteria and recommendations for CTA **HEAD and NECK**:

1. Patients with acute stroke symptoms presenting to your facility **within 24 hours of last known well** should receive a CTA. (CTA may be deferred if stroke is low in the differential diagnosis):
 - a. **Please call UC Stroke Team immediately (before imaging) – 513-584-8282**
2. Note that patients who are not eligible for IV thrombolytic may still be eligible for endovascular therapy.

Protocol:

- Do **not** delay IV thrombolytic while obtaining CTA:
 - a. If IV access takes more than 5 minutes, get a non-contrast head CT first and, if appropriate, start IV thrombolytic. Then attempt appropriate IV access for CTA head and neck.
 - b. Serum creatinine is not necessary prior to contrast administration. Do not delay imaging for these results (see AHA/ASA 2018 Guidelines for further detail).
- Obtain CTA of both **head and neck** – CTA of the head only is an inadequate study for stroke. Please ensure the order is for CTA head and neck.
- Minimum CTA specifications
 - a. Thin section source images of CTA required:
0.625 –1.25 mm thin axial source images (minimum 1.25 mm)
 - b. MIP reconstructions (can be done quickly on scanner by CT technologist)
Axial thick MIPs of 24 mm thickness and 4 mm intervals

24-hour Stroke Team consultations: 513-584-8282
24-hour transfers: 513-584-BEDS (2337)