Indications and Management of Blunt Cerebral Vascular Injury

Indications for CTA Extracranial w/ IV contrast after Trauma

- Unexplained or incongruous central or lateralizing neuro deficit
- Acute cerebral infarct on CT Brain- activate stroke team
- GCS $\leq$ 8 due to head trauma without evidence of ICH on CT Brain
- Facial Fracture pattern
    - Leforte II or III
    - Basilar Skull Fracture
    - Complex Mandible
- Cervical Spine Fracture
    - Subluxations at any level
    - C1-C3 fracture with high mechanism
    - Extension of fracture through transverse foramen
- Cervical Spinal Cord Injury
- Hanging or Strangulation victims
- Major Thoracic Injury – 1st rib fracture, scapula fx or thoracic aorta/major vessel injury

Treatment for BCVI

- Antiplatelet Medications (discuss with faculty prior to initiation)
    - ASA 325mg PO Daily
    - Can consider heparin if contraindication to ASA (must discuss with faculty)

Considerations for Neuro IR Consult (discuss with faculty prior to consultation

- Consider with Grade 4 or grade 5
- Concurrent ischemic CVA
- Attending Discretion

Follow-up

- Continue ASA on Discharge and order 3 month repeat CTA Extracranial/Neck w/ IV contrast on discharge
    - If BCVI present on repeat CTA, continue ASA if negative may discontinue ASA from trauma standpoint
    - If isolated does not need specific trauma clinic follow-up appointment but must inform nurse clinician for follow-up imaging phone call by either nurse clinician or APP
- If Neuro IR consulted- defer to Neuro IF for follow up and repeat imaging

Table 2 - Denver grading scale for blunt cerebrovascular injuries

Grade I:	irregularity of the vessel wall or a dissection/intramural hematoma with less than 25% luminal stenosis
Grade II:	intraluminal thrombus or raised intimal flap is visualized, or dissection/intramural hematoma with 25% or more luminal narrowing
Grade III:	pseudoaneurysm
Grade IV:	vessel occlusion
Grade V:	vessel transection