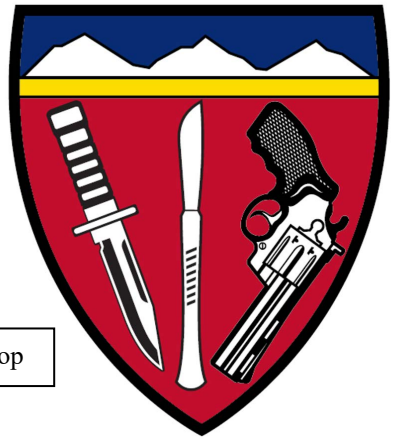
The Denver Health & Hospital Authority BCVI screening guideline.



Signs/Symptoms of BCVI
- Potential arterial hemorrhage from neck/nose/mouth
- Cervical bruit in pt < 50 yrs old
- Expanding cervical hematoma
- Focal neurologic defect: TIA, hemiparesis, vertebrobasilar symptoms, Horner's Syndrome
- Neurologic deficit inconsistent with head CT
- Stroke on CT or MRI

Yes

No

Risk Factors for BCVI
- High energy transfer mechanism
- Displaced mid-face fracture (LeFort II or III)
- Mandible fracture
- Complex skull fracture/basilar skull fracture/occipital condyle fracture
- Severe Traumatic Brain Injury (TBI) with GCS < 6
- Cervical spine fracture, subluxation or ligamentous injury at any level
- Near hanging with anoxic injury/ strangulations esp with LOC
- Clothesline type injury or seat belt abrasion with significant swelling, pain, or altered MS
- TBI with thoracic injuries
- Scalp degloving
- Thoracic vascular injuries
- Blunt cardiac rupture
- Upper rib fractures (1-3)

Yes

No

Stop

Multi-Slice CTA*

Equivocal Finding or High Clinical Suspicion → Arteriogram

Negative → Stop

Positive

Grade I Injury

Grade II-IV Injury

Grade V Injury

Surgery Indicated?

Yes

Surgically Accessible?

Yes → Operative Repair

No → Endovascular Treatment

No

Antithrombotic Therapy: Heparin (PTT 40-50 sec) or Antiplatelet Therapy**

Discuss with Interventional Radiology and Consider Transfer for Neuro-IR Intervention

Repeat CTA in 7-10 days***

Injury Healed?

Yes → Discontinue Antithrombotics

No

Antithrombotic for 3-6 months and re-image

Consider endovascular stenting for severe luminal narrowing, symptomatology, or markedly expanding pseudoaneurysm

Consider full anticoagulation with DOAC

* CTA with ≥64-channel optimal.
** Antiplatelet therapy is ASA 325mg.
*** Individualize timing of repeat CTA: if multiple injuries or high grade injury (III/IV), consider delay to 1-3 months.
If CC fistula and symptomatic, consider angiography and endovascular therapy. If asymptomatic CC fistula, reimage with CTA at 3-4 weeks.