

## **RECOMMENDATIONS for the MEDICAL/RADIOGRAPHIC EVALUATION of ACUTE ADULT. NON-FATAL STRANGULATION**

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1. Evaluate carotid and vertebral arteries for injuries **GOALS:** 2. Evaluate bony/cartilaginous and soft tissue neck structures 3. Evaluate brain for anoxic injury

# Strangulation patient presents to the Emergency Department

### History of and/or physical exam with ANY of the following:

- Loss of Consciousness (anoxic brain injury)
- Visual changes: "spots", "flashing light", "tunnel vision"
- Facial, intra-oral or conjunctival petechial hemorrhage
- · Ligature mark or neck contusions
- · Soft tissue neck injury/swelling of the neck/carotid tenderness
- **Incontinence** (bladder and/or bowel from anoxic injury)
- Neurological signs or symptoms (LOC, seizures, mental status changes, amnesia, visual changes, cortical blindness, movement disorders, stroke-like symptoms.)
- Dysphonia/Aphonia (hematoma, laryngeal fracture, soft tissue swelling, recurrent laryngeal nerve injury)
- **Dyspnea** (hematoma, laryngeal fractures, soft tissue swelling, phrenic nerve injury)
- Subcutaneous emphysema (tracheal/laryngeal rupture)

Consider administration of one 325mg aspirin if there is any delay in obtaining a radiographic study

#### **Recommended Radiographic Studies to Rule Out Life-Threatening Injuries\*** (including delayed presentations of up to 1 year)

- CT Angio of carotid/vertebral arteries (GOLD STANDARD for evaluation of vessels and bony/cartilaginous structures, less sensitive for soft tissue trauma) or
- CT neck with contrast (less sensitive than CT Angio for vessels, good for bony/cartilaginous structures) or
- MRA of neck (less sensitive than CT Angio for vessels, best for soft tissue trauma) or
- MRI of neck (less sensitive than CT Angio for vessels and bony/cartilaginous structures, best study for soft tissue trauma) or
- MRI/MRA of brain (most sensitive for anoxic brain injury, stroke symptoms and inter-cerebral petechial hemorrhage)
- Carotid Doppler Ultrasound (NOT RECOMMENDED: least sensitive study, unable to adequately evaluate vertebral arteries or proximal internal carotid) \*References on page 2

### History of and/or physical exam with:

- **No LOC** (anoxic brain injury)
- No visual changes: "spots", "flashing light", "tunnel vision"
- · No petechial hemorrhage
- No soft tissue trauma to the neck
- No dyspnea, dysphonia or odynophagia
- · No neurological signs or symptoms (i.e. LOC, seizures, mental status changes, amnesia, visual changes, cortical blindness, movement disorder. stroke-like symptoms)
- And reliable home monitoring

Discharge home with detailed instructions. including a lethality assessment, and to return to ED if: neurological signs/symptoms, dyspnea, dysphonia or odynophagia develops or worsens

Continued ED/Hospital Observation (based on severity of symptoms and reliable home monitoring)

- Consult Neurology Neurosurgery/Trauma Surgery for admission
- Consider ENT consult for laryngeal trauma with dysphonia
- Perform a lethality assessment per institutional policy

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(Recommendations based upon case reports, case studies, and cited medical literature)

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