



Recommendations: MEDICAL/RADIOGRAPHIC EVALUATION OF ACUTE ADOLESCENT/ADULT, NON-FATAL STRANGULATION

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GOALS:

1. Evaluate carotid and vertebral arteries for injuries
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:

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

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 to return to ED if: neurological signs/symptoms, dyspnea, dysphonia or odynophagia develops or worsens

Radiographic Study Required to R/O Life-Threatening Injuries*

- **CT Angio of carotid/vertebral arteries** (gold standard for evaluation of vessels and bony/cartilaginous structures, less sensitive for soft tissue trauma)
- **CT neck with contrast** (less sensitive than CT Angio for vessels, good for bony/cartilaginous structures)
- **MRA of neck** (less sensitive than CT Angio for vessels, best for soft tissue trauma)
- **MRI of neck** (less sensitive than CT Angio for vessels and bony/cartilaginous structures, best study for soft tissue trauma)
- **MRI/MRA of brain** (most sensitive for anoxic brain injury, stroke symptoms and intercerebral petechial hemorrhage)

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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,

*References on page 2

Version 1.3, 2/16
WSS



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