



RECOMMENDATIONS for the MEDICAL/RADIOGRAPHIC EVALUATION of the PREGNANT ADULT PATIENT WITH 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
 4. Evaluate/Monitor the fetus

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Pregnant Strangulation patient presents to the Emergency Department

Evaluate per institution Trauma Pregnancy Protocol/ OB Consultation

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, intraoral or conjunctival petechial hemorrhage
- Ligature mark or neck contusions
- Soft tissue neck injury/swelling of the neck/cartoid 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, unilateral headache, and bruit)
- 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)

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, per institution Trauma Pregnancy Protocol/OB Consultation to return to ED if: neurological signs/symptoms, dyspnea, dysphonia or odynophagia develops or worsens

Recommended Radiographic Studies to Rule Out Life-Threatening Injuries*

(including rare delayed presentations of up to 2 years)

- CT Angio of carotid/vertebral arteries - (GOLD STANDARD for evaluation of vessels and bony/cartilaginous structures, less sensitive for soft tissue trauma. **Safe for all stages of pregnancy and/or lactating patients.**) or
 - CT neck with contrast - (less sensitive than CT Angio for vessels, good for bony/cartilaginous structures. **Safe for all stages of pregnancy and/or lactating patients.**) or
 - MRIs without gadolinium:
 - MRA of neck (less sensitive than CT Angio for vessels) 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 intercerebral petechial hemorrhage)
- Safe to perform during all trimesters for pregnant and/or lactating patients.**
- MRIs with gadolinium (NOT RECOMMENDED: Use should be limited to situations in which the benefits clearly outweigh possible risks.)
 - Carotid Doppler Ultrasound (NOT RECOMMENDED: Least sensitive study, unable to adequately evaluate vertebral arteries or proximal internal carotid.)
- *References on page 2

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Continued ED/ Hospital Observation (based on severity of symptoms, reliable home monitoring, and a lethality assessment discussion)

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- Consult Neurology Neurosurgery/ Trauma Surgery/ OB for admission
- Consider ENT consult for laryngeal trauma with dysphonia



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

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