



# RECOMMENDATIONS FOR THE MEDICAL/RADIOGRAPHIC EVALUATION OF ACUTE ADULT/ADOLESCENT, **NON/NEAR FATAL STRANGULATION**

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Endorsed by the **National Medical Advisory Committee:**

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## GOALS:

1. Evaluate for acute medical conditions requiring immediate management/stabilization
2. Evaluate carotid and vertebral arteries for injuries (dissection/thrombosis)
3. Evaluate airway structures and other bony/cartilaginous/soft tissue neck structures

## STRANGULATION PATIENT PRESENTS TO THE EMERGENCY DEPARTMENT

### HISTORY (ANY of the following; current OR assault related and now resolved)

1. Loss of consciousness
2. Visual changes: "spots," "flashing lights," "tunnel vision"
3. History of altered mental status: "dizzy," "confused," "lightheaded," "loss of memory," "any loss of awareness"
4. Breathing changes: "I couldn't breathe," "difficulty breathing"
5. Incontinence (bladder or bowel)
6. Neurologic symptoms: seizure-like activity, stroke-like symptoms, headache, tinnitus, decreased hearing, focal numbness, amnesia
7. Ligature mark or neck contusion
8. Neck tenderness or pain/sore throat/pain with swallowing
9. Change in voice: unable to speak, hoarse or raspy voice

### PHYSICAL EXAM (ANY Abnormality)

1. Functional assessment of breathing, swallowing, and voice
2. Thorough examination of neck, eyes, TMs, oral mucosa, nose, airway, upper torso for: tenderness, swelling, bruising, abrasions, crepitance
3. Venous congestion/petechial hemorrhages/scleral hemorrhages
4. Ligature mark = **HIGH RISK**
5. Tenderness of airway structures/carotid arteries = **HIGH RISK**
6. Mental status/complete neurologic exam

**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)

1. CT Angio of carotid/vertebral arteries (GOLD STANDARD for evaluation of vessels and bony/cartilaginous structures, less sensitive for soft tissue trauma) or
2. MRA of carotid/vertebral arteries
3. Carotid Doppler Ultrasound (NOT RECOMMENDED - Unable to adequately evaluate vertebral arteries or proximal internal carotid arteries)
4. Plain Radiographs (NOT RECOMMENDED - Unable to evaluate vascular and soft-tissue structures)
5. Consider fiberoptic direct laryngoscopy to evaluate possible laryngeal injury or airway compromise

### POSITIVE RESULTS

1. Consult Neurology/Neurosurgery/Trauma Surgery for admission
2. Consider ENT consult for laryngeal trauma or dysphonia
3. Perform a lethality assessment per institutional policy

### NEGATIVE RESULTS

**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

**IF THE CTA IS NEGATIVE, CONSIDER OBSERVATION OF NEAR-FATAL STRANGULATION PATIENT IF THE AIRWAY IS OF CONCERN. OBSERVATION HAS **NO** ROLE IN RULING OUT A VASCULAR INJURY.**

# REFERENCES

Recommendations based upon case reports, case studies, and cited medical literature. Click below for hyperlinks, please note that some sources may require purchase or subscription.

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