The Training Institute on Strangulation Prevention’s Recommendations for the:

Medical/Radiographic Evaluation of Acute, Non-Fatal Adult Strangulation:

Goals:
1) Evaluate carotid and vertebral arteries for injuries
2) Evaluate bony/cartilaginous and soft tissue neck structures and the brain for injuries

Strangulation patient presents to the Emergency Department

Symptoms and History Associated with Life-Threatening Injuries

History of and/or physical exam with ANY of the following:
- LOC (anoxic brain injury)
- Visual changes: “spots”, “flashing lights”, “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, fracture, laryngeal nerve injury)
- Odynophagia (hematoma, 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
- No visual changes: “spots”, “flashing lights”, “tunnel vision”
- No petechial hemorrhage
- No soft tissue hemorrhage
- No dyspnea, dysphonia, odynophagia
- No drug/alcohol intoxication
- No neurological signs or symptoms (i.e. LOC, seizures, mental status changes, amnesia, visual changes, cortical blindness, stroke-like symptoms.)
- And reliable home monitoring

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)

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, odynophagia, dyspnea or fractures

Discharge home with detailed instructions to return to ED if: neurological signs/symptoms, dyspnea, dysphonia or odynophagia develops or worsens

*References on page 2
References:
The Training Institute on Strangulation Prevention’s Recommendations for the: 
Medical/Radiological Evaluation of Acute, Non-Fatal Strangulation:

11. Sethi PK, Sethi NK, Torgovnick J, Arsura E, Delayed Left Anterior and Middle Cerebral Artery Hemorrhagic Infarctions After Attempted Strangulation, A case report; Am J Forensic Med Pathol 2012;33:105-106
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