Strangulation

Judy Wolfe, RN, MSN, LMSW

Sexual Assault Care Coordinator/DVPI Coordinator

Northern Navajo Medical Center

Shiprock, NM 87420

judith.wolfe@ihs.gov

505-368-6304

Slides from Strangulation Presentation by Gail Starr, RN indicated by G.S.

Training Institute of Strangulation Prevention, San Diego - SP

Objectives

- Understand the lethality of strangulation.
- Understand the potential short-term and long-term health risks from strangulation.
- Basic assessment of strangulation and importance of advocating for an individual.

This presentation may bring up uncomfortable information or trigger traumatic memories for the participant.

Please seek support from a trusted individual to take care of yourself.



The minute you put pressure on someone's neck, you are really announcing that you are a killer."

 Gael Strack, JD. Institute for Strangulation Prevention

"Strangulation is homicide on the installment plan".

Leslie Hagan, Department of Justice, Office of Legal Education, Executive Office for U.S. Attorneys.

Strangulation

The ultimate power and control!

Can be taken to the brink of death and brought back again.



Best predictor of potential homicide

- Strangulation is, in fact, one of the best predictors for the subsequent homicide of victims of domestic violence.
- One study showed that "the odds of becoming an attempted homicide increased by about seven-fold for women who had been strangled by their partner" (Journal of Emergency Medicine, 2008).
- **GS**



STRANGULATION IN INTIMATE PARTNER VIOLENCE

FACT SHEET

STRANGULATION: the obstru

the obstruction of blood vessels and/or airflow in the neck resulting in asphyxia.



women will experience intimate partner violence (IPV) in their lifetime.¹

Of women at high risk, up to...



will experience near-fatal strangulation by their partner.²



are strangled manually (with hands).3 report losing 4 consciousness. are strangled along swith sexual assault/abuse.

9% are also pregnant.

of strangled women believed they were going to die. ⁶

And odds for homicide increase 750%

for victims who have been previously strangled, compared to victims who have never been strangled.⁷

HOWEVER... Oftentimes, even in fatal cases, there are NO EXTERNAL SIGNS of injury.³ Only half of victims have visible injuries Of these, only 15% could be photographed

Types of Strangulation

Manual - 1 Hand, 2 Hand, "chokehold"

Ligature - Object around neck (rope, cord, shirt)

Hanging - Gravity with ligature

Facts About Strangulation

- Strangulation is not choking choking is having a piece of food or an object lodged in your throat.
- Strangulation is caused by manual force, like having one or two hands around the neck, a forearm pressed on your neck or wrapped around your neck, or kneeling on your neck.
- Strangulation is also caused by a ligature, like a rope, phone cord, electric cord, shoelace or by hanging.
- SECONDS TO UNCONSCIOUSNESS, MINUTES TO DEATH.

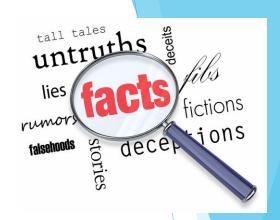


New Beginning Program brochure - Zuni, NM

Strangulation Happens Fast

- It takes about 7 seconds to become unconscious
- It takes about 14 seconds to go into a seizure
- It only takes between 15 and 30 seconds for the body to start to shut down and lose control of the bladder and bowels
- ► It only takes between one minute and 2 ½ minutes to die
- ► GS

Facts About Strangulation



- Strangulation is one of the most lethal forms of violence.
- ▶ It takes only 10 seconds to lose consciousness.
- ▶ It takes only 4 5 minutes until death occurs.
- You can die within 36 hours AFTER being strangled due to internal injuries.
- Strangulation occurs when blood vessels and air passages are closed by external pressure on the neck.
- Strangulation stops oxygen to the brain and blocks the airway.

Victim's Experience of Strangulation prior to loss of consciousness

- Stage 1: Denial "I couldn't believe this is happening to me".
- Stage 2: Realization "This really is happening to me."

DEATH

LIFE

- Stage 3: Primal The struggle to preserve life.
- Stage 4: Resignation "He's going to kill me: I hope my kids will be okay".
- McClane et. al.

The
Anatomy
of the
Larynx
and Vocal
Cords

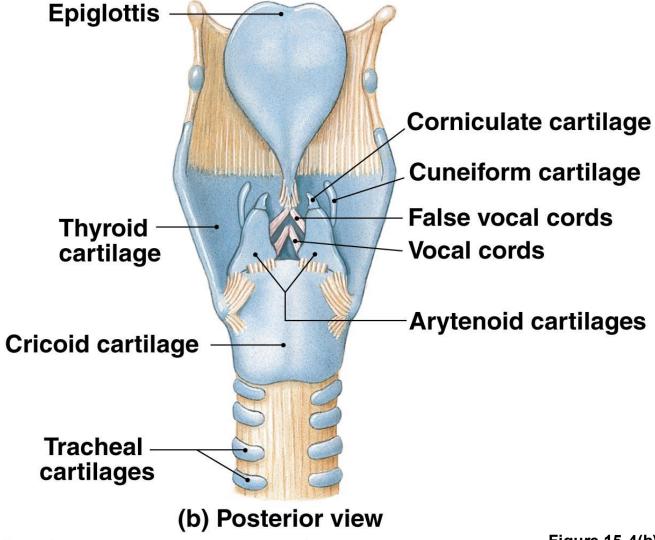


Figure 15-4(b)

The Anatomy of the Larynx and Vocal Cords

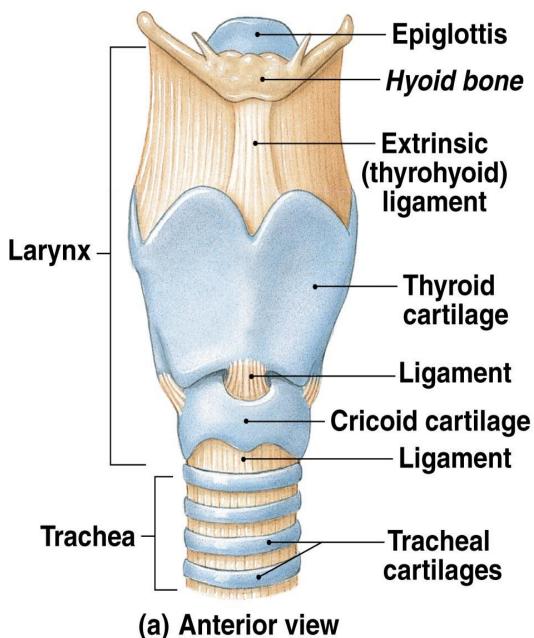
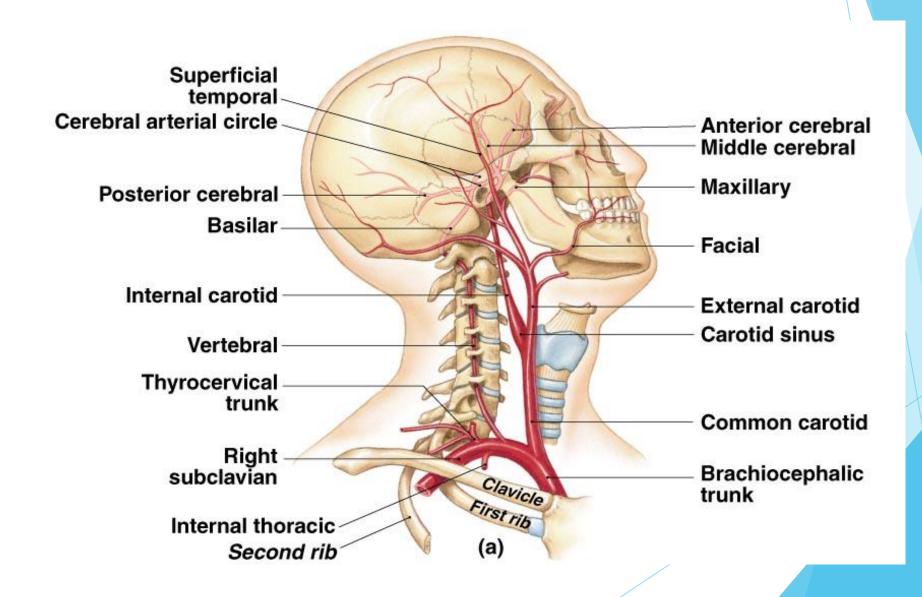
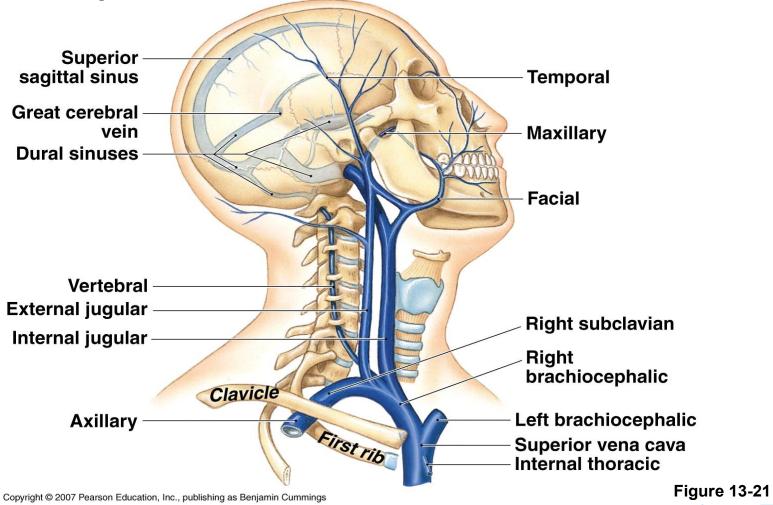


Figure 15-4(a)

Arteries of the Head and Neck

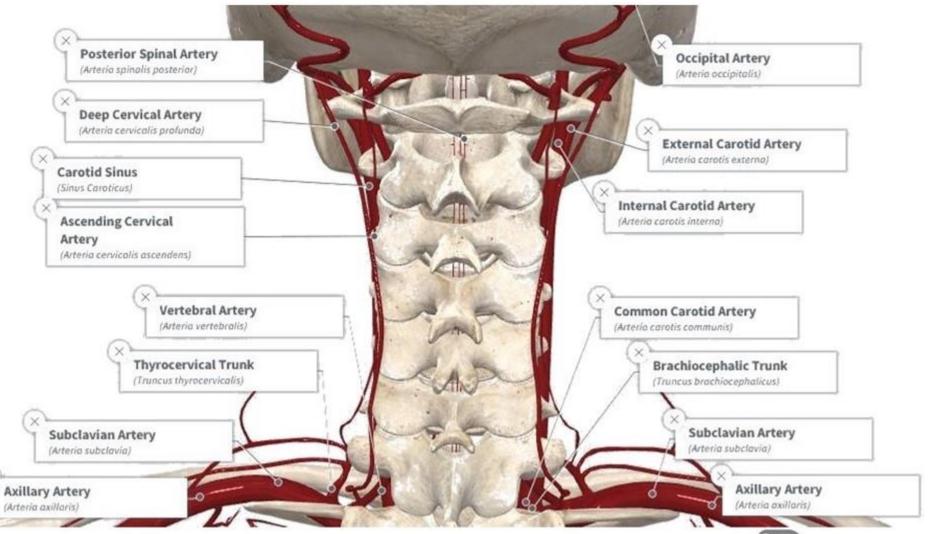


Major Veins of the Head and Neck



Carotid Arteries

- Carries oxygenated blood to brain
- 11 lbs. of pressure to occlude20 lbs. to open can of soda
- > 7 seconds of occlusion: unconsciousness and loss of memory
- ▶ 15 seconds of occlusion: possible brain infarct (stroke)



Posterior Cervical Arteries



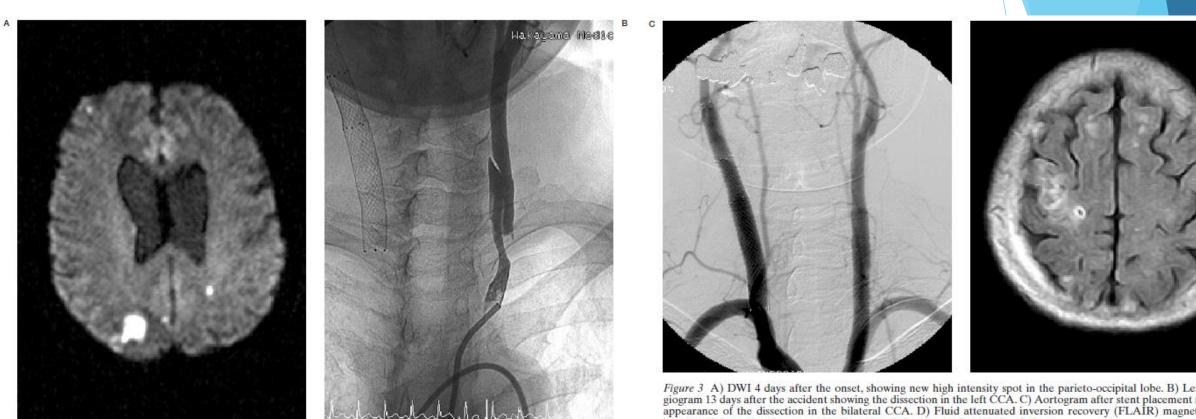


Figure 3 A) DWI 4 days after the onset, showing new high intensity spot in the parieto-occipital lobe. B) Left carotid angiogram 13 days after the accident showing the dissection in the left CCA. C) Aortogram after stent placement revealing disappearance of the dissection in the bilateral CCA. D) Fluid attenuated inversion recovery (FLAIR) magnetic resonance imaging 60 days after the onset, showing minor infarction in the right hemisphere.

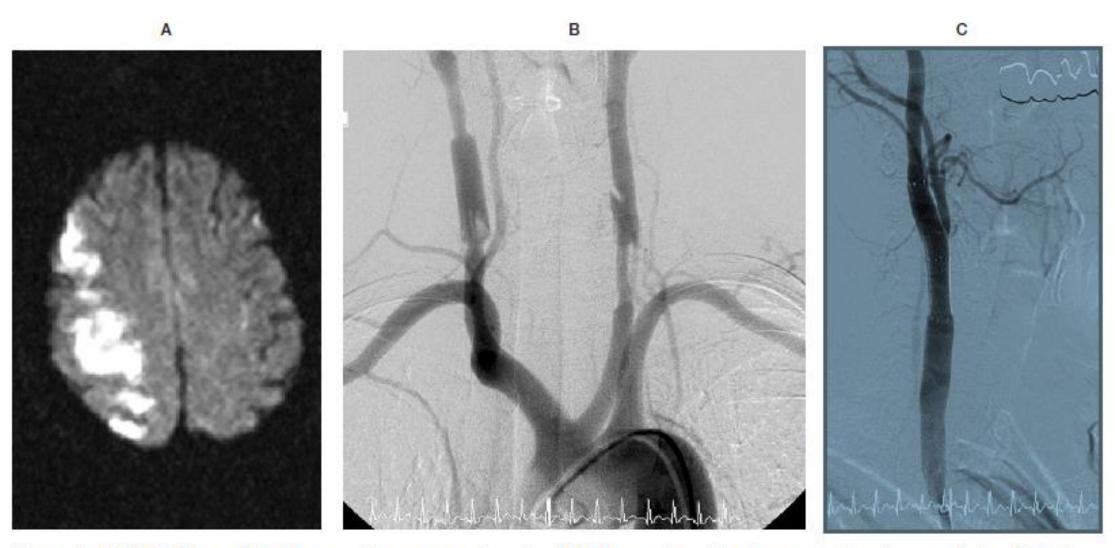
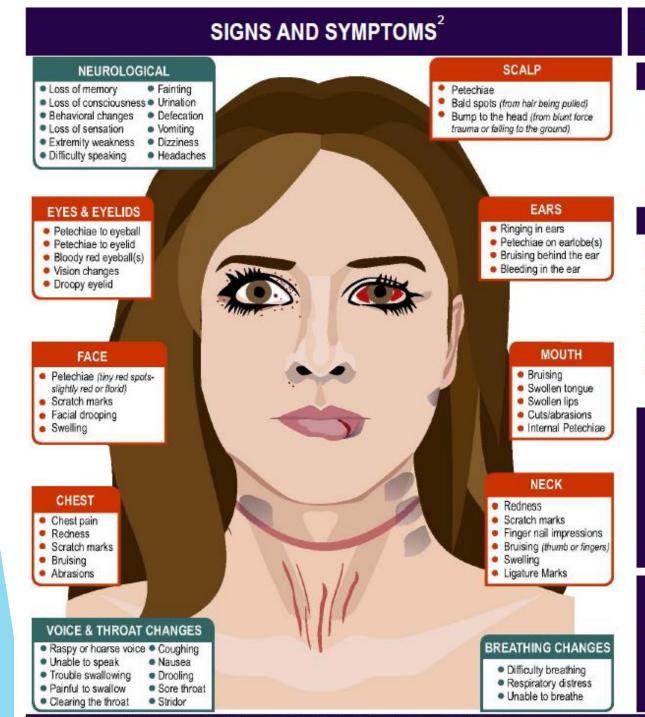


Figure 2 A) Diffusion-weighted magnetic resonance imaging (DWI) one day after the onset, showing new ischemic lesions in the right hemisphere. B) Aortogram one day after the trauma, showing bilateral common carotid dissection. Thrombus or intimal flap is recognized in the right common carotid artery (CCA). C) Right carotid angiograms after stent placement (right oblique view), revealing good patency of the right CCA.



CONSEQUENCES '

PSYCHOLOGICAL INJURY

PTSD, depression, suicidal ideation, memory problems, nightmares, anxiety, severe stress reaction, amnesia, and psychosis.

DELAYED FATALITY

Death can occur days or weeks after the attack due to cartoid artery dissection and respiratory complications such as pneumonia, ARDS and the risk of blood clots traveling to the brain (embolization).

Today, 38 States have legislation AGAINST STRANGULATION8

VAWA 2013 added strangulation and suffocation to FEDERAL LAW

VDBreitling Mit/Shiith/BG/BBetteck C/Watter SMbr/DWeiwus Merricks MTC P2608 lence and Characteristics of Sexual Violence, Stalking

3 Strack, G.B., McClane, G.E., & Hawley, D. (2001). A review of 300 attempted strangulation cases: Part I: Criminal Legal Issues

Journal of Emergency Medicine, 21(3), 303-309. 4 Shields et al. (2010). Living victims of strangula Forensic Medical Pathology, 31, 320-325.

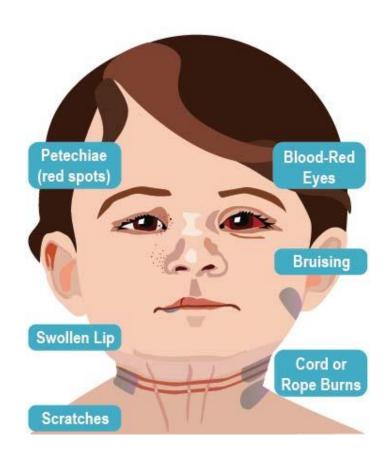
www.strangulationpreventioninstitute.com



101 W. Broadway. Suite 1770.

San Diego, CA 92101

Unfortunately, there is pediatric strangulation.













What We've Learned from Research

Studies show:

- Patients support DV assessments when done so privately
- They need to be asked about strangulation, specifically.
- No harm in assessing for DV
- Interventions improve health and safety
- Missed opportunities: patients fall through the cracks when we don't ask
- > SP

Strangulation Study Findings

• Study of 300 strangulation cases in San Diego:

- 50% had no visible injuries
- 35% insignificant to minor visible injuries
- 15% significant injuries.

SP

Strangulation Study Findings

- History of DV in 89% of cases
- Children present in over 50%
- Reluctance to seek medical attention

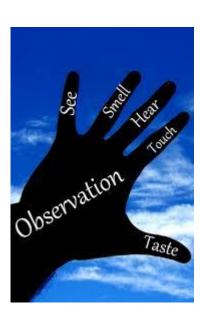


Documentation

- Did the victim lose consciousness?
- Do they have any idea how long?
- Did they hit their head?
- Does their voice sound hoarse?
- Do they have a sore throat?
- Did they lose bowel or bladder control?
- Did they have nausea or vomiting?
- Vision or hearing changes
- What do you observe?
- ▶ Is the victim pregnant? Risk of miscarriage.

Maybe you will observe.....

- Voice Changes
- Swallowing changes
- Breathing changes
- Mental status changes
- Bowel and bladder incontinence
- Neck swelling



Subjective - what they tell you.

- Painful/difficult swallowing
- Sore throat
- Light-headedness
- Nausea/Vomiting
- One-sided weakness
- Headache
- How they felt
- ► They tell you they thought they were going to die.
- S.



Listen carefully to the victim if the tell you they......

- ► Tire quickly
- Can't seem to wake up
- Slow to do things
- Short attention span
- Poor immediate memory
- Poor long-term memory of past events
- Difficulty learning new things and remembering recent events
- Can't say what I'm thinking well

- Poor planning
- Can't get started on or finish tasks
- Poor organization
- Blurts things out at the wrong time
- Poor awareness of problems and solutions
- Slow to read and remember what was read
- Slow to do simple addition or can't do it

Danger Assessment

- Originally developed by Dr. Jacquelyn Campbell in 1986 and the most recent revision in 2019 to include assessment for strangulation. This is an evidenced-based assessment and can be used for free. Certification can also be done for a minimal cost.
- Google "Danger Assessment" for further information or go to the Tribal Forensic Health Care site.

DANGER ASSESSMENT

Jacquelyn C. Campbell, Ph.D., R.N. Copyright, 2003; update 2019; www.dangerassessment.com

Several risk factors have been associated with increased risk of homicides (murders) of women and men in violent relationships. We cannot predict what will happen in your case, but we would like you to be aware of the danger of homicide in situations of abuse and for you to see how many of the risk factors apply to your situation.

Using the calendar, please mark the approximate dates during the past year when you were abused by your partner or ex-partner. Write on that date how bad the incident was according to the following scale:

- 1. Slapping, pushing; no injuries and/or lasting pain
- 2. Punching, kicking; bruises, cuts, and/or continuing pain
- 3. "Beating up"; severe contusions, burns, broken bones
- 4. Threat to use weapon; head injury, internal injury, permanent injury, miscarriage or choking* (use a © in the date to indicate choking/strangulation/cut off your breathing- example 4©)
- Use of weapon; wounds from weapon (If any of the descriptions for the higher number apply, use the higher number.)

		Yes or No for each of the following. ("He" refers to your husband, partner, ex-husband, ex-
partner	, or w	vhoever is currently physically hurting you.)
	1.	Has the physical violence increased in severity or frequency over the past year?
	2.	Does he own a gun?
	3.	Have you left him after living together during the past year?
		3a. (If you have never lived with him, check here:)
	4.	Is he unemployed?
	5.	Has he ever used a weapon against you or threatened you with a lethal weapon? (If yes,
		was the weapon a gun? check here:)
	6.	Does he threaten to kill you?
	7.	Has he avoided being arrested for domestic violence?
	8.	Do you have a child that is not his?
		Has he ever forced you to have sex when you did not wish to do so?

10. Does ne ever try to choke/strangle you or cut off your breathing?
10a. (If yes, has he done it more than once, or did it make you pass out or black out or make
you dizzy? check here:)
11. Does he use illegal drugs? By drugs, I mean "uppers" or amphetamines, "meth", speed,
angel dust, cocaine, "crack", street drugs or mixtures.
12. Is he an alcoholic or problem drinker?
13. Does he control most or all of your daily activities? For instance, does he tell you who you
can be friends with, when you can see your family, how much money you can use, or when
you can take the car? (If he tries, but you do not let him, check here:)
14. Is he violently and constantly jealous of you? (For instance, does he say: "If I can't have you,
no one can.")
15. Have you ever been beaten by him while you were pregnant? (If you have never been
pregnant by him, check here:)
16. Has he ever threatened or tried to commit suicide?
17. Does he threaten to harm your children?
18. Do you believe he is capable of killing you?
19. Does he follow or spy on you, leave threatening notes or messages, destroy your property,
or call you when you don't want him to?
20. Have you ever threatened or tried to commit suicide?
Total "Yes" Answers

Thank you. Please talk to your nurse, advocate, or counselor about what the Danger Assessment means in your situation.



RECOMMENDATIONS for the MEDICAL/RADIOGRAPHIC EVALUATION of ACUTE ADULT, NON-FATAL STRANGULATION

LOUISVILLE

Prepared by Bill Smock, MD and Sally Sturgeon, DNP, SANE-A
Office of the Police Surgeon, Louisville Metro Police Department
Endorsed by the National Medical Advisory Committee: Bill Smock, MD, Chair; Cathy Baldwin, MD; William Green, MD;
Dean Hawley, MD; Ralph Riviello, MD; Heather Rozzi, MD; Steve Stapczynski, MD; Ellen Tailiaferro, MD; Michael Weaver, MD

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:

- · 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 symtoms.)
- 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 symtoms)
- And reliable home monitoring

эировинеова енгриуаетни (пасноалы унусы тирине)

Recommended Radiographic Studies to Rule Out Life-Threatening Injuries* (including delayed presentations of up to 6 months)

- 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 intercerebral petechial hemorrhage)
- Carotid Doppler Ultrasound (NOT RECOMMENDED: least sensitive study, unable to adequately evaluate vertebral arteries or proximal internal carotid)
 *References on page 2

Discharge home with detailed instructions 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

Identifying Visible Injuries

The reference guide below provides a summary of what to look for on a victim who has reported being strangled or who is believed to have been strangled.

Face	Eyes & Eyelids	Nose	Ear	Mouth			
Red or flushed	Petechiae to R and/or L eyeball (circle one)	Bloody nose	Petechiae (external and/or ear	Bruising			
Dinpoint red spots		Broken nose	canal)	Swollen tongue	9		
(petechiae)	Petechiae to R and/or L eyelid (circle one)	(ancillary finding) ☐ Petechiae	Bleeding from ear canal	☐ Swollen lips			
	Bloody red eyeball(s)			Cuts/abrasions (ancillary finding)			
Under Chin	Chest	Shoulders	Neck	Head			
Redness	Redness	Redness	Redness	Petechiae (on scalp)			
Scratch marks	Scratch marks	Scratch marks	Scratch marks	Ancillary finding	gs:		
☐ Bruise(s)	Bruise(s)	Bruise(s)	☐ Fingernail impressions	Hair pulled	Ide		
Abrasions	Abrasions	Abrasions	Bruise(s)	Bump	The		
			Swelling	Skull fracture	sym hav		
			Ligature mark	Concussion			

Identifying Symptoms of Injury

The reference guide below provides a summary of what to look for when seeking to identify any symptoms of internal injury on a victim who has reported being strangled or who is believed to have been strangled.

Breathing Changes	Voice Changes	Swallowing Changes	Behavioral Changes	Other
Difficulty Breathing	Raspy voice	☐ Trouble swallowing	Agitation	Dizzy
[] Hyperventilation	Hoarse voice	☐ Painful to swallow	Amnesia	Headaches
Unable to breathe	Coughing	□ Neck Pain	☐ PTSD	☐ Fainted
Other:	Unable to speak	☐ Nausea /Vomiting	☐ Hallucinations	Urination
		☐ Drooling	Combativeness	Defecation

STRANGULATION EVALUATION TOOL

Exam Date	Exam Time	
Strangulation Date	Strangulation Time	

Glascow Coma Scale (Circle the appropriate score for each, complete the total at the bottom)

Eye Opening	Score
Spontaneous	4
To speech	3
To pain	2
None	1

Verbal Response	Score
Oriented	5
Confused	4
Inappropriate	3
Incomprehensible	2
None	1

Motor Response	Score
Obeys commands	6
Localizes to pain	5
Withdraws from pain	4
Flexion to pain (decorticate)	3
Extension to pain (decerebrate)	2
None	1
Total Score (enter)	

Description of strangulation event(s) in patient's own words:										

Metho	d/Manner of Strangulat	tion: (Check all that apply) Estimated length of time:	seconds	n	ninutes				
	Two hands	Estimated length of time:	seconds_	n	ninutes				
	"Chokehold" Estimat	ted length of time:sec							
	Approached from the		_	_					
	Approached from be	hind							
		on attempts during incident (how man	y)			_			
		neck during strangulation							
	Jewelry on suspect's	hands/wrist during strangulation							
	Ligature used (descri	ibe if possible)				_			
		(describe)							
	_					_			
Durin	g strangulation did the p	patient note any of the following: (C	heck all that apply)					
	Loss of consciousnes	ss/blacking out/passing out	Numb	er of times					
	Incontinence of Urin	e Incontinence of Stool		Si	ince the stra	ngulation, has the patie	nt noted any of the follow	ving symptoms: (Chec	k all that <u>apply</u>)
	Bleeding (describe)				☐Co	ughing	Drooling	Dyspnea	
	Patient's feet were li				Dy	sphagia	Odynophagia	Headache	
	_	in addition to strangled (with what)			Lig	ththeadedness	Neck Pain	Neck swelli	ng
	_	3 \ 7_			Str	idor	Hemoptysis	Tinnitus	
					Re	spiratory distress	Dizziness	■Vomiting	
					□No	se Pain	Nausea	Inability to	tolerate supine position
					Son	re throat	Crepitus/Subcutaneou	s emphysema	
					Un	controlled shaking	Combativeness/irritab	ility/restlessness	
					■Vo	ice changes (describe)			
					□ Vis	sion changes (describe)			
					Lo	ss of memory (describe)_			
					■Me	ental Status Change (descr	ribe)		
					□B1e	eeding (describe)			
					\square We	eakness/numbness of extre	emities (describe)		

On a s	cale of	zero (0)	meani	ng no pi	essure	and ten	(10) me	eaning t	he wors	t press	sure	you can imagine, h	now h	ard							
was th	e suspe	ct's gri	p or pre	essure (d	ircle th	e one th	at appl	ies):													
	0	1 ong-Bak	2 er FAC	3 ES Scale	4 used (i	5 nsert sco			8	9		10									
Exam	ination:	: it Pregna	ant.	□No		□Ye	- e	Num	iber of v	veeks											
		Heart Ra			,		23	11011	1001 01 0	vccks_		-									
				_	during o	or since s	trangula	ation:													
	O2 Sa	turation	:								_		_	-			/				
		Time	:	Leve	e1:						£	Petechiae None		Facial							
		Time		Leve	e1:								_	Ears							
	Lung	Sounds:									_			Eyes							
	Heart	Sounds:	:								_			Conjunct	tival						_
	Ca	rotid pu	ılse 🔲 1	Normal	Abn	ormal (I	Describe	.)			Tongue injury None Yes (Describe)										
											(Oral cavity injuries [No	one 🔲 Yes	s (Descr	ribe)					
											S	Subconjunctival hem	norrh	age 🔲 Noi	ne 🔲 Y	es (Des	cribe)				
											N	Neurologic findings:	: [Ptosis		Facial d	iroop 🔲	Unilatera	l weak	ness	
														F	Paralysi	s 🔲	Loss of	sensation	ı		
											Visible Injury None Yes (described on body maps below)										
											Ι	Digital photographs	taken	Digital photographs taken 🔲 No 🔲 Yes							

Was the patient strangled: ☐ Yes ☐ No Symptoms: A= Observed by SANE **B= Reported by Patient Breathing** Voice Behavioral **OTHER Swallowing** $\Box A \Box B$ $\Box A \Box B$ $\Box \mathbf{A} \quad \Box \mathbf{B}$ $\Box A \Box B$ $\Box A \quad \Box B$ ☐ Trouble swallowing ☐ Difficulty ☐ Raspy voice ☐ Agitation ☐ Dizzy Breathing ☐ Hoarse voice ☐ Painful to swallow ☐ Amnesia Headaches ☐ Hyperventilation ☐ Neck Pain ☐ Coughing ☐ Hallucinations Fainted ☐ Unable to breathe ☐ Unable to □ Drooling Combativeness Nausea speak □ Vomiting Urination Defecation **Eyes & Eyelids** Ear Face Nose Mouth $\Box \mathbf{A} \quad \Box \mathbf{B}$ $\Box A \Box B$ $\Box \mathbf{A} \quad \Box \mathbf{B}$ $\Box \mathbf{A} \Box \mathbf{B}$ $\Box \mathbf{A} \quad \Box \mathbf{B}$ Petechiae to **R** / **L** ☐ Bloody nose ☐ Petechiae (external ☐ Bruising ☐ Red or flushed ☐ Petechiae eveball ☐ Broken nose and/or ear canal) Swollen tongue ☐ Scratch marks Petechiae to **R** / **L** ☐ Petechiae ☐ Bleeding from ear Swollen lips canal eyelid Cuts/abrasions Bloody red eyeball(s) **Under Chin** Chest Shoulders Neck Head $\Box A \qquad \Box B$ $\Box \mathbf{A} \quad \Box \mathbf{B}$ $\Box \mathbf{A} \qquad \Box \mathbf{B}$ $\Box A \Box B$ $\Box \mathbf{A} \quad \Box \mathbf{B}$ Redness Redness Redness Redness ☐ Petechiae (on scalp) Scratch marks Scratch marks ☐ Scratch Scratch marks **Ancillary findings:** Fingernail ☐ Hair pulled ☐ Bruise(s) Bruise(s) marks impressions □ Abrasions Abrasions ☐ Bruise(s) Bump Bruise(s) Skull fracture ☐ Abrasions Swelling ☐ Hair pulled ☐ Ligature mark Method and Manner of Strangulation (have patient demonstrate and photograph if possible) □ One Hand (R / L) □ Two hands □ Forearm (R / L) □ Knee/Foot □ Ligature/other: For approx. how long?_____ From 1 (low) to 10 (high), how hard was grip? _____ ☐ Multiple attempts: ☐ Multiple methods: ☐ Is the assailant □ Right handed □ Left handed □ unknown? Was patient's head pounded against anything? If yes, describe: Did the assailant say anything when strangling patient? What did the patient feel was going to happen?

Other information:

SUMMARY

- Must be assessed even if no visible injuries!
- A lethal form of violence.
- ► A common form of violence during IPV and SA

Contact me at judith.wolfe@ihs.gov for any electronic resources from this presentation.

Resources

- "Danger Assessment" Jacquelyn Campbell, PhD. RN, FAAN
- Example of "Dear Doctor" letter from Training Institute on Strangulation Prevention.
- Example of strangulation discharge instructions. <u>judith.wolfe@ihs.gov</u>
- Non-Fatal Strangulation Documentation Toolkit: International Association of Forensic Nurses.
- Strangulation Brochure: New Beginnings Program, Zuni, NM
- Strangulation Evaluation Tool: Memorial Hospital, Colorado Springs
- "The Strangulation Patient": Jill Rable, RN, MSN-ED: webinar, March 2015
- Training Institute on Strangulation Prevention
- ► Tribal Forensic Health Care. <u>www.tribalforensichealthcare.org</u>