

Strangulation and Suffocation

NAPSA Conference 2012

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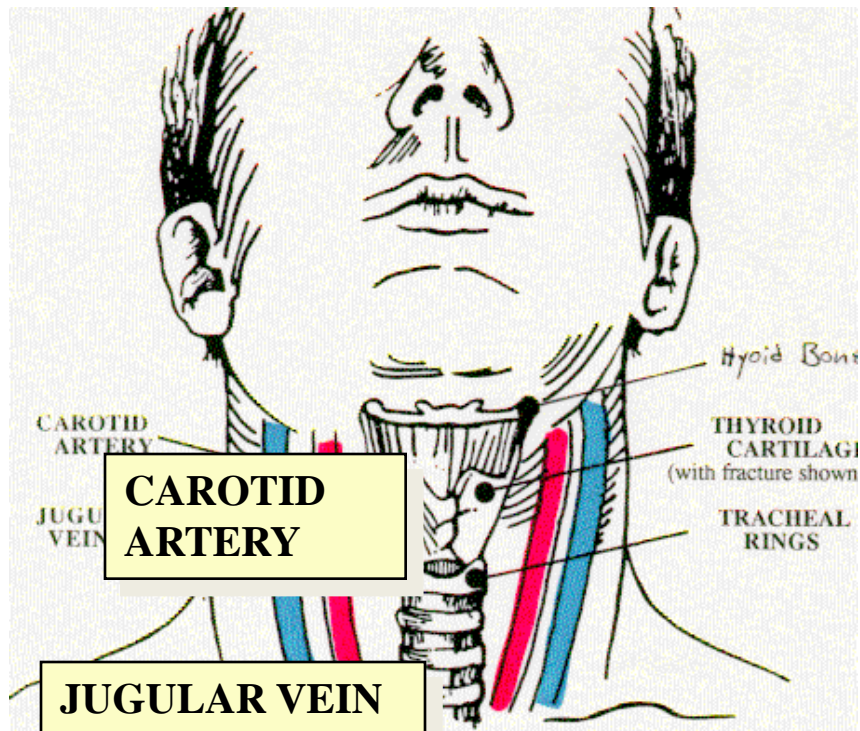
Strangulation and Suffocation

- Strangulation and suffocation remarkably frequent
- 1 in 9 violent deaths
- Often overlooked because signs and symptoms subtle
- Common in domestic violence and family violence contexts
- Lethality marker
- Occurs across lifespan

Definition

- Strangulation is a form of asphyxia characterized by closure of the blood vessels and air passages of the neck as a result of external pressure on the neck

Anatomy 101



HYOID BONE

**THYROID
CARTILAGE (with
fracture shown)**

**TRACHEAL
RINGS**

Suffocation

- Covering the mouth and/or nose with:
 - Hands
 - Pillow
 - Plastic bag
- Sitting on the victim's chest

Elder Strangulation

- Often an outcome of history of domestic and family violence
- Relationship to financial control
 - Part of control of money, denial of meds, treatment, neglect
- Natural disease processes increase risk of death
 - Disease states
 - Medications such as blood thinners

Arrests and Arraignments Involving Strangulation Offenses from Nov. 11, 2010 – Feb. 22, 2011

by Stacey Bederka

- 2,003 arrest events between Nov. 11, 2010 and Feb. 22, 2011 in New York in which
- A suspect was charged with strangulation either at the time of arrest or arraignment.
 - 7.8% involved suspects 50 and older
- Study of impact of new strangulation law in New York
 - Source: New York State Division of Criminal Justice Services, Office of Justice Research and Performance, April 2011



Forms

- Manual
- Ligature

Ligatures

- Examples: flexible cord, rope, electrical extension cord, telephone receiver cord, bra strap or bikini top
- When wrapped around the neck increase potential for lethal
 - Surface area for application of force is reduced More compression of the neck tissue for amount of applied force.

Injury During Strangulation Assault

- External signs of strangulation are **absent** in over half of all victims, even when examined by skilled medical personnel alerted to the possibility of strangulation injury.
- **Death can occur without any external marks at all.**

First Responders

- SD Study of 300 Non Fatal Strangulation Cases (1995)
 - 42 % - No visible injury
 - 20 % - Pain only
 - 22 % - Minor visible injury
 - Redness and/or scratches
 - 16 % - Visible injury
 - Red marks and/or bruising

Suffocation Signs and Symptoms

- Skin abrasions (scratch marks, fingernail marks) and tiny red spots (petechiae) just over the face in strangulation, or generalized in the skin in suffocation
- Abrasions over nostrils
- Lip incised abrasions where lips are pushed against teeth

Strangulation Signs and Symptoms

- Red linear ligature marks or bruising
- Neck pain
- Sore throat
- Loss of control of bodily functions

Injury in Suffocation

- Many cases will have no injury.
- If the victim is impaired by severe natural disease, or intoxicated, or physically restrained, then suffocation may leave no physical marks.
- If there are no teeth, then the telltale lip injuries are not likely.
- Suffocation done with a medical device, like obstruction of an endotracheal tube or turning off a ventilator leaves no findings.

The Medical Process

- Temporary obstruction of the carotid arteries, or the jugular veins (strangulation), or the airway (suffocation)
- Produces ASPHYXIATION -- an interruption of oxygenation

Asphyxiation

- If asphyxiation persists for long enough, the victim becomes unconscious, and then dies
- The rate of development of asphyxiation depends **primarily** on the circulation of blood through the brain;
- To a much lesser extent it depends on the victim's ability to breathe through the airway –
 - Airway obstruction is rarely a factor in fatal strangulation assaults

“Point Of No Return”

- Asphyxiation becomes irreversible,
- Spontaneous breathing will not resume unless cardiopulmonary resuscitation and mechanical external life support measures are started
 - After about 4 minutes of sustained bilateral jugular compression
 - Can happen faster with carotid obstruction, and has occurred as quickly as 15 seconds into a carotid compression “choke hold.”

Asphyxia Leads To:
Anoxic Encephalopathy

- **A form of irreversible--frequently fatal--brain damage caused by obstructing the delivery of oxygen to the brain.**
- **Known as “brain death”.**

Force Required

- The amount of force or pressure required to sustain complete compression of both jugular veins varies tremendously from one victim to the next, so that a discussion of foot-pounds of force or joules of required energy is not relevant.
- A large muscled athletic person is, of course, more difficult to strangle than a weak, impaired, frail elder.

Petechiae

- May be occasionally observed in living people
- More often a finding on dead bodies, observed at autopsy
- If caused by strangulation or suffocation, associated with a near-fatal experience

- Petechia, alone, in the absence of other signs like internal injuries of the larynx or ligature marks on the neck, are not sufficient to prove strangulation as the cause of death.

- The case is stronger when petechiae are accompanied by a history of stridor, dysphonia or dysphagia

STRANGULATION AND SUFFOCATION

- **With complete and sustained obstruction of both jugular veins:**
 - 20-30 seconds causes petechiae above the point of constriction
 - 2 minutes to full unconsciousness
 - another 2 minutes of sustained unconsciousness until death
- **With complete obstruction of the mouth and nose by suffocation, same approximate time interval, but petechiae become generalized throughout the body, rather than just isolated to the head.**

Times are approximate. The presence of certain predisposing conditions can accelerate the process of irreversible asphyxiation -- the duration of sustained compression required to reach the “point of no return.”

The Absence of Petechiae

- Stroke (cerebral cortical infarct) as a late sequella of strangulation:
- If the strangulation results in obstruction of Carotid Artery
 - No petechiae
 - Blunt force injury within the artery to prove strangulation

Strangulation is a Lethality Indicator

- Strangulation is more commonly a cause of death for women than men across the life span
 - Age 65 and older
 - Men 7.0%
 - Women 33%
- Studies of women who were victims of intimate partner strangulation homicide and attempted homicide range from 24% to 62%
 - See Glass, Laughon, Campbell, Block, Hanson, Sharps & Taliaferro (2008)

Strangulation is a Lethality Indicator

- San Diego study found 56% of strangulation victims experienced more than one strangulation event
- A study of 506 domestic violence homicides and attempted homicides found rates of strangulation of
 - Homicides 45%
 - Attempted homicides 43%
- Prior attempted strangulation increased odds of strangulation homicide by more than 6 times (Glass et al, 2008)

Strangulation is a Lethality Marker

- Lethality markers that multiply the odds of homicide five times or more over nonfatal abuse include: (a) threats to kill, 14.9 times more likely; **(b) prior attempts to strangle, 9.9 times;** (c) forced sex, 7.6 times; (d) escalating physical violence severity over time, 5.2 times; and (e) partner control over the victim's daily activities, 5.1 times more likely.

States Enacting Laws re Strangulation/Suffocation (Partial)

- Alaska
- Connecticut
- Florida
- Hawaii
- Idaho
- Illinois
- Indiana
- Louisiana
- Maryland
- Missouri
- Michigan
- Minnesota
- Nebraska
- North Carolina
- Oklahoma
- Texas
- Virginia
- Washington
- West Virginia
- Wisconsin

Conducting the Investigation

With Thanks to Gael Strack, Family Justice Alliance and Det. Mike Agnew

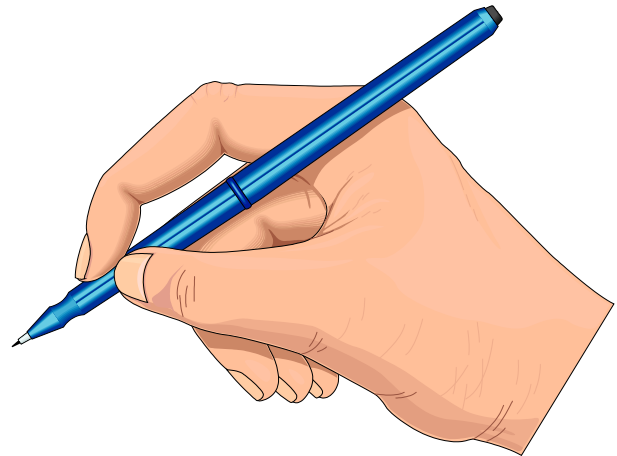
See “Resources,” at www.NFJCA.org

Corroboration

- Anything brought to scene or moved from one location within the scene to where the strangulation occurred
- Document what you see and hear
- Immediate medical

Use Follow-up Questions

- To help identify the type of assault
 - Simple assault
 - Using the neck as a handle
 - Aggravated assault
 - Attempted homicide



How- mechanics

What they saw- visual changes

How they felt

What they were thinking about

What stopped the perpetrator

Does their voice sound different

What's different now (swallowing, mental status)

Pain anywhere

Bruises anywhere

How – Mechanics

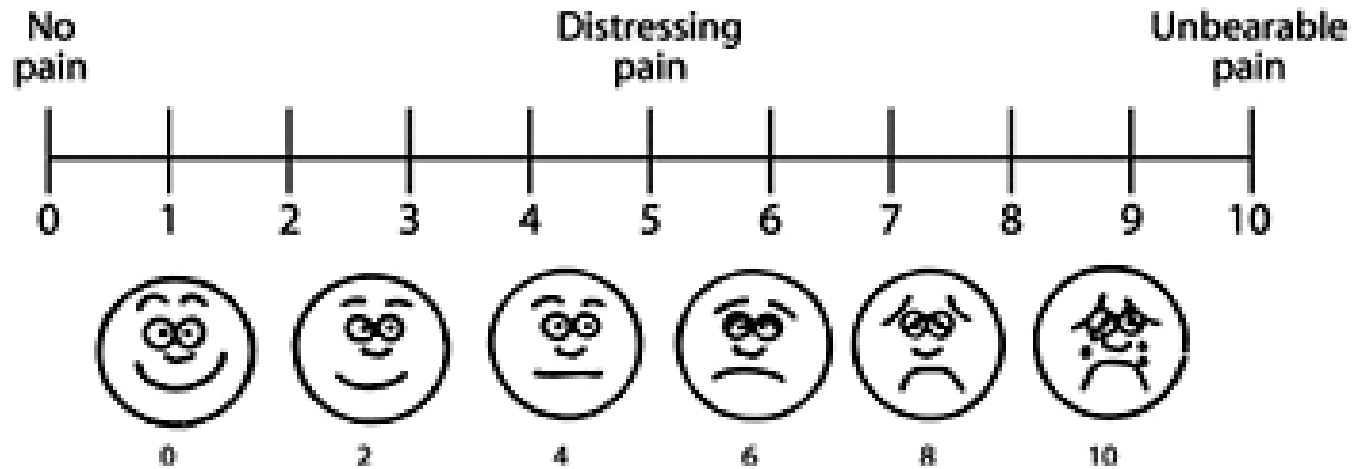
- How long did the suspect hold your throat?
 - Close your eyes and tell me when you think it ended
- Was there shaking involved?
- Did the strangling stop and start up again?

Ask and Document

- How long?
 - To avoid: “he grabbed me briefly”
 - Ask the victim to close their eyes and tell you “when” to indicate how long the suspect applied pressure to her neck. Monitor the actual time.
- How hard, on a scale from 1 to 10 with 10 being the hardest, was the pressure?
 - “it must have been 9, otherwise I would be dead right now.”

How Painful?

- Use the scale below to better estimate the level of the pain you are experiencing:



How Painful – Chart?

- Use this chart to help you describe your particular level of pain to your healthcare provider. My pain is:

Throbbing

Stabbing

Dull

Aching

Pinching

Steady

Localized

Pervasive

Chronic (persistent)

Acute (in the moment)

Other:

(describe) _____

What feels different now than before you were strangled?

- ❑ Is your **breathing** any different now? Describe
- ❑ What does it feel like when you **swallow**? Describe
- ❑ What happened to you after they let go of you?
 - Was there any **coughing**?
 - Was there any **vomiting**?
 - People who are strangled sometimes lose control of their **bodily functions**. Did anything happen to you?

Video Clips

- Many digital cameras also have video capability.
- Good way to document voice changes, difficulty swallowing and/or drooling.
- Expressions of pain.

Did anyone Have Jewelry?

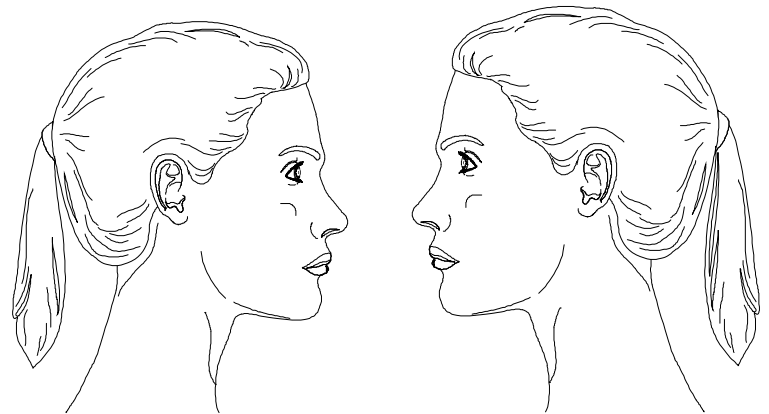
- The Victim?
- The Suspect?
- Still on the victim? Suspect?
- Broken?
- Where was it located?
- Was it found and seized?
- Photographed?

Manual Strangulation

- Ask victim to demonstrate (not on self) how strangled
- Look for injuries at those pressure points.
 - Take photos of injuries or lack of injuries
- Be aware demo may traumatize victim and cause him or her to relive experience

Look for injuries consistent with the method of strangulation

- Carotid restraint: shoulders
- One hand, C-clamp: neck
- Two hands: neck, chest, behind the ear, jaw
- Ligature



Ligature strangulation

- Any object(s) used?
 - Photograph & Impound.
- How did the object get there?
 - To prove intent

Someone Needs to Look Under Clothing

- Injuries can be at different locations:
 - Chest
 - Shoulder
 - Back of the neck
 - Breasts

If Victim Reports Any Symptoms, **Immediate** Medical Response

- Any trouble breathing?
- Any trouble swallowing?
- Any pain or tenderness?

How Did You Feel?

- “fuzzy,” “dizzy”
- “head rush”
- “I saw stars.”
- “I saw black and white.”
- “I couldn’t breathe”
- “I passed out”
- “I vomited several times”
- “I had trouble swallowing”
- “I felt like my head was going to explode”
- “I felt a rush of blood to my head”

Any voice changes?

- Tape record or videotape your interview with the victim
- Listen to 911 tape
- Document symptoms such as voice changes and/or swallowing changes

Follow-up Call to Victim

- Call the victim a few days later to document symptoms
 - Voice changes
 - Trouble swallowing,
 - Difficulty eating
 - Difficulty sleeping
 - Headaches

Symptom Questions

- Did you urinate?
- Did you vomit?
- Did you defecate?

Questions

- What were you wearing at the time of the incident?
- Have you changed your clothes?
- Thrown them away?
- Put them in the washing machine?
- Put them in laundry basket?
- Where are they now?
- Normalize the conduct
- Sometimes victims who have been strangled report they have urinated or defecated. Did that happen to you?
- I have worked with many victims who have been strangled. I have learned that it is common for them to urinate or defecate during the incident? Did that happen to you?

Did the victim suffer a possible concussion? www.cdc.gov

- A blow or jolt to the head can cause a type of mild brain injury called a concussion.
- Sometimes whiplash can cause a concussion.
- The signs can be subtle and missed.

What Did The Suspect Say?

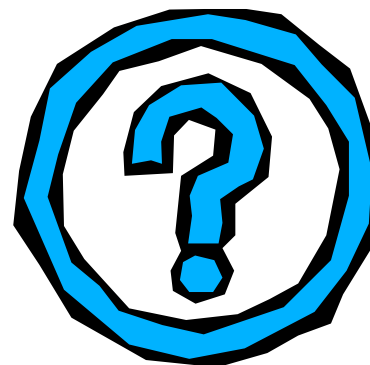
- “I’m going to kill you, you fucking bitch”
- “Die Bitch die”
- “No judge, no cop, no attorney will keep you safe”
- “I’m going to pop your neck”
- “I didn’t mean to squeeze so tight”
- “I don’t need a fucking gun to kill you”

What Did You See?

- “I saw anger, madness and hatred in his eyes.”
- “He had the eyes of a demon. They were full of hate. He was my husband.”
- “He seemed possessed”

What Did You Think Was Going To Happen?

- “I thought I was going to die.”
- “I was afraid he would kill me. He wouldn’t mean to kill me, but it was getting worse, he wouldn’t know when to stop.”
- “I began saying “Hail Mary’s” ... I thought I was going to be seeing my mother who died two weeks ago”



How Did It End?

- I escaped.
- I passed out
- My kids started screaming.
- Police arrived.
- What did you say?
 - I can't breathe.
 - Let me go.
 - Stop, you're killing me.

Any swelling or lumps to neck?

- Look for neck swelling or lumps especially if victim reported multiple attacks or prior strangulation assaults.
- Ask victim to look in the mirror.
- Ask victim if her neck looks swollen?
- Ask victim to gently feel her neck and if there are any lumps that were not there before?
- If so, call paramedics immediately and insist on medical attention immediately. Do not ask.

If Victim is Able

- Ask victim to keep a log

With Victim Consent, Take Plenty of Photographs

- Victim:
 - Full body
 - Close up of face
 - Neck
 - Eyes
 - Shoulders
- Defendant:
 - Full body
 - Close up
 - Arms
 - Hands

Paramedic Records

- Obtain copy of paramedic's call to the hospital
- Many of the symptoms will be recorded in records
- May not require victim's release

Questions?

- Thank You!
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