American Academy of Forensic Sciences
Meeting Highlights

Chicago, 2011
Is back surgery related to overdose?
Christina J. Tatum, MD (Alabama)

- Identified decedents with a surgical scar over the midline of the back
- Decedents with a back scar were 13 times more likely to die of overdose than another body without a scar
Jet Ski Passenger deaths
Dennis Rhee, MD (Dallas)

- Severe laceration of anus and vagina resulted in the death of a young woman, she was passenger and fell off the moving jet ski
- Thought to be impalement
- Thrust of the jet ski caused injury
- Driver not at risk because throttle turns off automatically when driver falls off
Drowning and Bacteria
Small number of drowning deaths (10) versus 10 controls

Some oceans, some freshwater

Cultured blood, peripheral and central

All drowning victims had bacteria reflective of their water environment

Controls were negative
DNA extraction from Paraffin blocks
Which paraffin blocks should you pick? (Alex John, MD, Harris county)

- More fixation (formalin time) = more degradation of DNA
- Fresh bodies—send block with spleen
- Decomposed bodies—send blocks with liver and spleen plus muscle, if available
- If non-fixed tissue is available, in decomps, muscle is good
Retinal hemorrhages in infants
Peripheral Retinal hemorrhages Associated with Wedging (Stephen Lenfest, MD, Wake Forest)

- 4 month old wedged between mattress and headboard. RHs extending to ora serrata
- 6 month old wedged between mattress and wall. RHs to ora serrata
Peripapillary Intrascleral hemorrhages, pathognomonic of abuse?
(Candace Schoppe, MD Wake Forest)

- 2 infants delivered by emergency cesarean after mothers in MVAs
- Both mothers had pelvic fractures
- Both infants had skull fractures
- Infants with flame-shaped hemorrhages radiating from optic nerve
H1N1 Fatalities
Erin Brooks, MD (Fatalities in New Mexico)

- Rapid Disease Course (14/52 autopsied) 3.5 days
- In 75% H1N1 was not known to be the cause of death until autopsy performed
- Alveolar edema most common (75%), not DAD (16%)
- Native Americans overly represented
Hanging Deaths
Ahmet Hilal, MD (Deaths in Turkey)

- Data actually including hanging deaths and strangulation deaths
- 35% (of 170 total cases) had no internal findings in neck, only skin lesions
Study of non-lethal filmed hangings
Anny Sauvageau, MD (Canada)

- 4 minutes is traditionally used as the time to death in asphyxia
- Rapid loss of consciousness 10 seconds, mild generalized convulsions 4 seconds, decerebrate rigidity 19 seconds, deep rhythmic abdominal respirations 19 seconds, decorticate 38, loss of muscle tone 1 minute 17, end of breathing 2 minutes, last muscle movement 4 minutes
- S and M video, recovery after 40 seconds
Limb lesions in hanging
Anne Desjarlais, Montreal

- Usually back of arms, anterior legs, not both
- 6% had bruises, 5% abrasions
- Be careful: anterior forearms, posterior legs, both arms and legs—statistically more indicative of homicide by strangulation
Thyroid Cornea—Triticea cartilage
Joao Pinheiro, Portugal
Adrenal Hemorrhage—Waterhouse-Friderichsen Syndrome—Lee Tormos MD, South Carolina
Adrenal Hemorrhage

- Classic is meningococcemia
- 4 cases in 800 autopsies
- Staphylococcus aureus, Streptococcus pneumonia, Pseudomonas, yeast
Fentanyl redistribution postmortem
Clarissa Krinsky, MD  New Mexico
Redistribution and lab variation

- Marked variation in measured concentrations between samples drawn at different times and sites
- Marked variation in measured concentrations in duplicate samples sent to two different labs
Animal Hair at Crime scene and DNA
Atlanta Child Murders—Wayne Williams

- Atlanta Child Murders
- July 1979-May 1981
- Found dog hairs
- Linked to Sheba