

Forensic Pathology Rotation - Objectives

Patient Care

Procedural Skills

- A. **Objective** – Many of the skills learned in this rotation overlap with those of the hospital forensic setting. While some of those are reiterated below, additional procedures particular to forensic pathology are also listed. It is not expected that the resident will perform or observe every one of these findings within a single month, however they should be familiar with them through observation of other staff cases and through the required reading.
- i. Ability to perform an adequate dissection (Virchow method) including:
 1. Dissection of the heart and sectioning of coronary arteries
 2. Appropriate sectioning of upper respiratory system (including vessels and bronchi of the lungs), gastrointestinal tract (esophagus, stomach, duodenum, small and large intestine), liver, pancreas, spleen, kidneys, bladder, and prostate, testes, ovaries, uterus, fallopian tubes and ovaries (as appropriate).
 3. Location and dissection of adrenal glands, thyroid gland, parathyroid glands
 4. Dissection of the brain; including removal of brain:
 1. Dissection of Circle of Willis
 2. Dissection of cerebrum, brainstem and cerebellum
 - ii. Ability to perform additional procedures:
 1. Reflection of scalp (without cosmetic damage) and removal of calvarium
 2. Removal of the pituitary gland
 3. Stripping of the dura mater
 4. Examination of the middle and inner ear
 5. Removal of the tongue and neck organs (without causing cosmetic damage)
 6. Removal of the spinal cord with and without dura
 7. Ability to test in-situ for pulmonary thromboemboli, air embolus, and pneumothorax
 8. Removal of testes
 9. Examination of the legs for deep venous thrombi
 10. Open the sphenoid sinus
 - iii. Forensic pathology procedures:
 1. Gunshot wounds and shotgun wounds:
 - a. Be familiar with basic differences between handguns, rifles, and shotguns
 - b. Identify entrance and exit wound characteristics
 - c. Establish direction of fire and involved (injured) structures
 - d. Identify range characteristics (soot, stippling, muzzle abrasions)
 - e. Describe bullet characteristics and estimate caliber (small, medium, large)
 - f. Identify buckshot, birdshot, and wad material
 2. Sharp force injuries
 - a. Identify stab wounds and incised wounds
 - b. Establish direction and depth of penetration
 3. Blunt force injuries
 - a. Identify abrasions, lacerations, contusions and fractures
 - b. Identify chop injuries
 4. Asphyxia

- . Examine hanging findings including ligatures and ligature furrows
- a. Identify petechial hemorrhages (skin, eyes)
- b. Identify fractures of the hyoid bone and thyroid cartilage
- c. Perform and interpret anterior and posterior neck dissections
- 5. Drug related deaths
 - . Acquire basic knowledge of common street drugs (cocaine, marijuana, methamphetamine, heroin, etc.)
 - a. Interpret toxicology results and their implications to the autopsy
- 6. Ancillary testing
 - . Understand when additional pediatric procedures such as metabolic screening and microbiology cultures are appropriate
 - a. Understand when histologic examination is appropriate and what sections are appropriate for a given case.
 - b. Identify cases that require special testing such as carboxyhemoglobin levels and testing for volatiles
- B. Plan:**
 - i. Procedural skills will be taught by attending pathologists; and experienced residents on their second rotation
 - ii. Residents are not expected to keep a procedure log, however, they are expected to keep a log of their cases.
- C. Assessment:**
 - i. The residents receive verbal assessment by the staff during the autopsy.

Interpretive skills:

- A. Objectives:**
 - i. Ability to interpret, present, and concisely summarize (in writing) gross pathologic findings, with a particular focus on description of injuries.
 - ii. Competently perform an external, internal and microscopic examination (with interpretation of gross and microscopic pathologic changes)
- B. Plan:**
 - i. Interpretative skills are taught by the attending pathologists and experienced residents
- C. Assessment:**
 - i. Interpretative skills will be assessed by attending pathologist informally through editing/correcting of resident's autopsy reports which have been turned in for review prior to finalization