



Laboratory Result Report

Patient: Harman, Clark  
MRN: 182222  
DOB/Age: 2/9/2011 (12 yrs)  
Sex: Male  
CSN:

Autopsy Report (Final result)

WFAM24-00167

Authorizing Provider:	Giffen, Mark Anthony Jr., DO	Ordering Provider:	Giffen, Mark Anthony Jr., DO
Pathologist:	Giffen, Mark Anthony Jr., DO		

Staff Pathologist: Giffen, Mark Anthony Jr., DO

Autopsy Assistant: Welborn, Hailey Nichole

Expired: 2/3/2024  
Autopsied: 2/6/2024  
Reported: 6/19/2024

Aut ME Medical Examiner  
Anthony Messer  
Transylvania County

FINAL DIAGNOSIS

- I. Smothering
  - A. Asphyxia
- II. Contusions of the left lower extremity

Electronically signed by Giffen, Mark Anthony Jr., DO on 6/19/2024 at 1552

SUMMARY OF FINDINGS

The cause of death is asphyxia due to smothering. The manner of death is homicide.

No anatomic cause of death was determined at the time of autopsy. No significant natural disease was

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present to have caused or contributed to death. Non-specific findings included swelling of the brain. Mild bruising was present on the left thigh and leg without significant internal injuries. Age adjusted growth charts indicate that the decedent was between the 50th and 75th percentile for height and between the 5th and 10th percentile for weight.

A sexual assault kit was collected at the time of autopsy and results were negative (as reported by law enforcement). No physical evidence of trauma was noted on examination.

Toxicologic testing of postmortem femoral blood samples detected elevated levels of cyproheptadine and fluoxetine (and its metabolite) which were likely artificially elevated due to postmortem redistribution. Liver tissue levels of fluoxetine (and its metabolite) were within normal range. These findings were discussed with the Chief Toxicologist at the North Carolina Toxicology Laboratory, who is in agreement with this determination. Testing did not detect an elevated or toxic level of clonidine.

Testing of vitreous (eye) fluid detected no dehydration, diabetes mellitus or kidney impairments.

His medications were sequestered and reviewed independently by law enforcement, and the medical examiner. The only irregularity noted was the absence of 3 clonidine tablets. No medical administration records were identified for the decedent at the camp and it is unclear if he took any of the missing medication.

According to the Transylvania County Medical Examiner, investigative reports and the Transylvania County Sheriff's Office, the decedent had a history of anxiety, attention-deficit/hyperactivity disorder (ADHD) and migraines. He had no known seizure disorder or prior seizures. Due to ongoing behavioral issues, he was brought from his home in New York to the Trails Carolina wilderness program at the request of his family. He reportedly had no health complaints or abnormal behavior during travel or after arrival. He brought with him all needed and appropriate medications for at least 30 days. He had been at the camp for less than 24 hours when he was found unresponsive in a cabin with other adolescent attendees and adult counselors.

According to protocol, the decedent was placed to sleep in a bivy (small camping enclosure) with a sleeping mat and sleeping bag according to program protocol. The program's protocol required the bivy to be placed on top of a thick mil plastic sheet which was folded up the sides in the form of a 'canoe'. The opening to the bivy was then secured with an alarm device such that if the occupant attempted to exit the bivy, it would alarm and wake up the counselors in the cabin. According to investigative reports, the internal mesh bivy door, which is normally used to secure the opening, was torn and the outer weather resistant door was instead using to secure the opening with the alarm device.

Based on multiple accounts and investigation, the decedent was placed to sleep in the bivy without incident. Sometime around 2300 he was noted to be moving around and making noise in the bivy and counselors removed him at that time. He relaxed and fell to sleep outside the bivy a short time later. Due to protocol, he was made to wake up and re-enter the bivy at which time he was again secured with the alarm device. A counselor did note he was moving around again about 1-2 hours after the initial incident but stopped moving shortly after. Routine checks were performed throughout the night, but due to the outer, opaque layer of the bivy being closed, he could not be visualized. In the morning, the counselors attempted to wake him up but noted he was not moving. Upon opening the bivy, he was found to be turned around 180 degrees from the entrance, with his head at the enclosed end of the bivy and his feet near the opening. He was also noted to not be wearing pants, which was a common practice for him at home. Resuscitation was attempted by camp personnel while emergency medical providers were summoned. After emergency medical personnel arrived, it was determined that he was already beyond life saving measures due to rigor mortis being present, indicating he had likely been dead for several hours.

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It should be noted that a common warning on commercially available bivy products indicates that the outer, weather resistant opening should not be fully secured as it may lead to condensation and breathing restriction. This information was obtained on basic web search.

Asphyxia due to smothering refers to death due to the inability to breath in oxygen, in this case due to covering the nose and mouth with a non-breathable material. It is a diagnosis of exclusion, meaning all other reasonable causes of death must be excluded and there needs to be sufficient evidence to support the asphyxia event occurred. Autopsy examination revealed no natural disease which could explain death. Toxicology testing also revealed no toxic levels of his prescription medications, over the counter medications or common drugs of abuse. Therefore, all common natural and toxic causes of death were reasonably excluded. According to investigation, the decedent was inside the bivy but oriented opposite to the intended use which would have allowed the waterproof material to fall onto his head and face. The outer, waterproof opening was fully secured and closed with an audible alarm which could not be opened by the decedent and the entire bivy was also partially surrounded by a thick plastic sheet 'canoe' under and on the sides of the bivy. These support restriction of breathing due to these external factors. It is unclear if elevated temperature (hyperthermia) may have also played a role in death since he was partially undressed and the way the sleeping area was constructed could have resulted in increased environmental temperature.

He was placed into this compromised sleeping area by other(s) and did not have the ability to reasonably remove himself from the situation with the alarm securing the opening. The standard protocol was deviated from due to using a damaged bivy and securing the outer weather resistant door instead of the inner mesh panel. Lastly, the counselors could not check on him as they should due to the opaque nature of the outer panel, preventing them from potentially noting the problem and delivering aid before he died. With this combination of factors, the death is best certified as homicide.

**EXTERNAL EXAMINATION**

Body Weight: 78 lb  
Body Length: 60 in

*Representatives of the Transylvania County Sheriff's office are present at the time of autopsy examination.*

The body is that of a well developed, well nourished, White adolescent male, who appears compatible with the stated age. Body identification includes tags on the body bag and left wrist bearing the decedent's name and date of death. Affixed to the zippers of the body bag is a blue seal bearing "NC MedEx 0085008".

The body is received clothed in a red hooded sweatshirt and blue shirt. No personal effects accompany the body. His medications were received, counted and taken as evidence by representatives of the Transylvania County Sheriff's Office.

The body has been refrigerated. Rigor is fully fixed in the extremities and jaw. Diffuse, fixed, red-purple livor extends over the right side and posterior surfaces of the body, except in areas subject to pressure.

The scalp hair is light brown and measures to 14 cm in length over the crown. The irides appear brown; the pupils are symmetrical. The corneae are cloudy. The sclerae and conjunctivae are engorged. No petechiae are on the palpebral or bulbar conjunctivae. The nose and ears are not unusual and the nasal septum is intact. The lips and gums are pale. The teeth are in adequate condition. The neck is without masses, and the larynx is in the midline.

The thorax is symmetrical. The abdomen is flat. Genitalia are those of a adolescent male in Tanner stage I; no injuries involve the penis, scrotum or anus. The anus and back have no unusual features. The upper and

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lower extremities are well developed and symmetrical without absence of digits.

Identifying marks and scars consist of a 5 x 0.1 cm pale linear scar on the lateral left leg, a 0.5 cm pale round scar on the lateral left leg; two pale round scars on the posterior right thigh up to 2.5 cm in maximal dimension; a 1 cm pale linear scar on the posterior right thigh.

**EVIDENCE OF INJURY**  
**HEAD AND NECK:**

On the interior mucosal surface of the lateral, inferior left lip is a 0.2 cm red abrasion with heaped margins.

A layered anterior neck dissection is performed to reveal no hemorrhages within the subcutaneous soft tissues, musculature or thyroid gland and associated tissues. The hyoid bone and laryngeal cartilages are intact without hemorrhage or fracture.

**CHEST AND ABDOMEN:**  
None

**UPPER EXTREMITIES:**  
None

**LOWER EXTREMITIES:**  
On the lateral right hip is a 4.5 cm purple contusion. On the anterior left knee is a 0.5 cm abrasions with rolled pale margins. On the left shin is a 1.5 cm purple contusion.

**INTERNAL EXAMINATION**  
**BODY CAVITIES**

Panniculus adiposus: 0.5cm

The pleural and abdominal cavities contain no abnormal quantities of fluid and no fibrous adhesions. All body organs are present in normal and anatomical position.

**CENTRAL NERVOUS SYSTEM**  
Brain weight: 1520 gm

No subscalpular contusions or skull fracture are present. The dura mater and falx cerebri are intact without adherent blood. The leptomeninges are thin and translucent and with no areas of extravasated blood or exudates. The cerebral hemispheres are symmetrical with moderate global cerebral edema. No atrophy or mass lesions are present. The structures at the base of the brain, including cranial nerves and blood vessels, are intact and free of abnormality. The arteries of the circle of Willis are in the usual anatomical configuration and are patent. Sections through the cerebral hemispheres reveal no lesions within the cortex, subcortical white matter, or deep parenchyma of either hemisphere. The cortex is continuous and of uniform thickness. The basal ganglia, thalami, and Ammon's horn have no unusual features. The cerebral ventricles are lined by glistening ependyma and are of normal caliber. Sections through the brain stem and cerebellum reveal no lesions. The substantia nigra and locus ceruleus have age appropriate pigmentation. The cerebral aqueduct is patent and the fourth ventricle is not dilated.

**NECK**

The soft tissues of the neck, including strap muscles, and large vessels, have no abnormalities. The hyoid bone and laryngeal structures are intact and the adjacent musculature has no areas of extravasated blood.

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The lingual mucosa is intact; the underlying firm red-brown musculature is devoid of hemorrhage.

**CARDIOVASCULAR SYSTEM**

Heart weight: 150 gm

The pericardial surfaces are smooth and glistening; the pericardial sac is free of significant fluid or adhesions. The coronary arteries arise normally, follow the usual distribution of a right dominant pattern without abnormality. The chambers and valves bear the usual size-position relationships. The myocardium is dark red-brown and firm; the atrial and ventricular septa are intact. The thickness of the walls of the heart is as follows: 0.7 cm., left ventricle; 0.5 cm., interventricular septum; 0.1 cm., right ventricle. The aorta and its major branches arise normally, follow the usual course and are widely patent, free of significant atherosclerosis and other abnormality. The vena cava and its major tributaries return to the heart in the usual distribution and are free of thrombi.

**RESPIRATORY SYSTEM**

Right lung weight: 340 gm

Left lung weight: 280 gm

The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth and yellow-tan. Copious amounts of frothy fluid are present throughout the airways. The pleural surfaces are smooth and glistening. Lobar divisions are of the usual configuration. The pulmonary parenchyma is dark red-purple, exuding moderate amounts of blood and frothy fluid; no focal lesions are noted. The pulmonary arteries are normally developed, patent, and without thrombus or embolus.

**LIVER AND BILIARY SYSTEM**

Liver weight: 1000 gm

Bile volume: 5 ml

The hepatic capsule is smooth, glistening and intact, covering red-brown parenchyma with no focal lesions. The gallbladder contains green, slightly mucoid bile; the mucosa is velvety. The extrahepatic biliary tree contains no calculi. The portal vein and its tributaries are patent.

**ALIMENTARY TRACT**

The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds, and the lumen has no significant contents. The serosa of the small and large bowel is smooth and glistening. The appendix is present. The pancreas has a gray-tan, lobulated appearance, and the ducts are unobstructed.

**GENITOURINARY TRACT**

Right kidney: 70 gm

Left kidney: 70 gm

Urine volume: 320 ml

The renal capsules are smooth and thin, semi-transparent, and strip with ease from the underlying, smooth, red-brown, firm, cortical surface. The cortex is sharply delineated from the medullary pyramids, which are red-purple to tan. The calyces, pelves, and ureters are not dilated. The relationships at the trigone are arranged in the usual anatomical configuration. The mucosa of the urinary bladder is gray-tan and smooth. The prostate and seminal vesicles have no abnormal findings.

**RETICULOENDOTHELIAL SYSTEM**

Spleen weight: 100 gm

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Thymus weight: 27 gm

The spleen has a smooth, intact capsule covering red-purple, firm parenchyma; the lymphoid follicles are unremarkable. The regional lymph nodes appear normal. The bone marrow is red-purple and homogeneous, without focal abnormality. The thymus has the typical lobulated grey appearance without petechiae.

**ENDOCRINE SYSTEM**

Combined adrenal gland weight: 12.2 gm

The pituitary, thyroid, and adrenal glands contain no lesions.

**MUSCULOSKELETAL SYSTEM**

The bony framework, supporting musculature, and soft tissues are not unusual.

**MICROSCOPIC DESCRIPTION**

**Block Summary:**

1. Liver; Kidney; Pancreas
2. Lungs
3. Heart
4. Brain
5. Brain
6. Brain
7. Conduction system
8. Conduction system
9. Heart
10. Cardiac apex
11. Lungs
12. Lungs
13. Kidney; Liver; Spleen
14. Cerebellum; Basal ganglia
15. Pons; Hippocampus
16. Rib

**Microscopic Description:**

The liver is organized into plates of hepatocytes 1-2 cell layers thick without steatosis or significant lobular inflammation. The portal tracts contain an appropriate number of bile ducts and blood vessels without inflammation or fibrosis. The central veins are patent without thrombosis.

The spleen has well delineated red pulp and white pulp without atypical architecture or lymphocyte morphology.

The pancreas has moderate autolytic changes. The pancreas has well-formed acinar structures and islets without atypia. No significant inflammation or fibrosis is present.

The kidneys have an appropriate number of glomeruli without significant sclerosis or inflammation. The tubules have mild autolytic change without inflammation, tubule drop out or fibrosis. No polarizable material is present.

The heart has no significant inflammation or fibrosis. The cardiac myocytes are unremarkable. The myocardial vessels are patent without significant medial hypertrophy or thrombosis. The conduction system

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has no significant inflammation or fibrosis.

The lungs have normal alveolar architecture with scattered extravasated intra-alveolar erythrocytes. The interstitium adjacent to the bronchi and bronchioles demonstrate focal scattered lymphoid aggregates. No significant fibrosis or acute inflammation is present. No polarizable material is present.

Representative sections of the brain demonstrate no neuronal loss, inflammation, gliosis or significant hypoxic ischemic changes.

Representative sections of bone marrow have appropriate trilineage hematopoiesis without atypia.

**EVIDENCE**

Evidence turned over to representatives of the Transylvania County Sheriff's Office injury a blood spot card, pulled scalp hair, a body bag seal, finger nail scrapings from body hands, a sexual assault kit and the decedent's clothing and medications.

**Toxicology Results**

Toxicology Folder: T202401828  
Case Folder: F202402847

Status of Report: Approved

Report Electronically Approved By: Sandra Bishop-Freeman, PhD

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SPECIMENS received from Mark A. Giffen on 09-feb-2024

S240005698: 20.0 ml Blood	CONDITION: Postmortem	
SOURCE: Aorta	OBTAINED: 06-feb-2024	
Amphetamines -----	None Detected LCMS	05/02/2024
Benzodiazepines -----	None Detected LCMS	05/02/2024
Cocaine metabolite -----	None Detected LCMS	05/02/2024
Ethanol -----	None Detected	05/02/2024
Gabapentin/Pregabalin -----	None Detected LCMS	05/02/2024
Opiates/Opioids -----	None Detected LCMS	05/02/2024
Organic Acids/Neutrals -----	None Detected	05/02/2024
Organic Bases -----	Present	05/02/2024

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S240005699: 14.0 ml Blood	CONDITION: Postmortem	
SOURCE: Femoral Vessel	OBTAINED: 06-feb-2024	
Cyproheptadine -----	0.055 mg/L	05/02/2024

*\*\* Comments Concerning This Result \*\**  
*Analysis was performed by NMS Labs.*  
*\*\* End of Comments Concerning This Result \*\**

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Fluoxetine -----	0.78 mg/L	05/02/2024
Norfluoxetine -----	0.46 mg/L	05/02/2024

S240005700:      Liver                      CONDITION: Postmortem  
                  SOURCE: Liver                    OBTAINED: 06-feb-2024

Fluoxetine -----	3.6 mg/kg	05/02/2024
Norfluoxetine -----	2.0 mg/kg	05/02/2024

S240005701: 1.0 ml Vitreous Humor      CONDITION: Postmortem  
                  SOURCE: Eye                              OBTAINED: 06-feb-2024

Chloride -----	116 mmol/L	05/02/2024
Creatinine-----	Less than 0.2 mg/dL	05/02/2024
Glucose -----	56 mg/dL	05/02/2024
Potassium-----	Greater than 9.0 mmol/L	05/02/2024
Sodium -----	131 mmol/L	05/02/2024
Urea nitrogen -----	21 mg/dL	05/02/2024

S240005702: 17.0 ml Urine                      CONDITION: Postmortem  
                  SOURCE: Urinary Bladder                    OBTAINED: 06-feb-2024

Accredited by the American Board of Forensic Toxicology, Inc.

050224 15:02      \*\*\* END OF REPORT \*\*\*

**MEDICAL THERAPY**

No evidence of emergency resuscitation and/or medical therapy is present at the time of autopsy examination.

**Specimens**

A      Autopsy

**\*\*\*END OF REPORT\*\*\***

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