



**HENNEPIN COUNTY
MEDICAL EXAMINER'S OFFICE
AUTOPSY REPORT**



ME NO.: 15-6355

MEDICAL RECORDS NO.: 412 21 38

CASE TITLE: GUNSHOT WOUND OF THE HEAD

DECEASED: Jamar O'Neal Clark **SEX:** M **AGE:** 24

DATE AND HOUR OF DEATH: 11-16-15; 9:32 p.m.

DATE AND HOUR OF AUTOPSY: 11-17-15; 8:40 a.m.

PATHOLOGIST: Andrew M. Baker, M.D.

FINAL DIAGNOSES:

24-year-old man who was shot by another person; taken to Hennepin County Medical Center (HCMC), where he later died

- I. Gunshot wound of the head, penetrating, intermediate range of fire
 - A. Entrance just lateral to left eye
 - B. Pathway through bony structures of left cheek/orbit (left zygomatic bone and orbital bones), orbital contents, bones of left anterior cranial fossa, left frontal lobe of the brain, optic chiasm and optic nerves, midbrain, and right occipital lobe of the brain
 - C. Associated findings
 - 1. Multiple skull fractures (with associated subgaleal and periosteal hemorrhage)
 - 2. Diffuse subdural and subarachnoid hemorrhage, with right convexity subdural hemorrhage collection (approximately 50 mL)
 - 3. Cerebral edema with cerebellar tonsillar softening
 - 4. Proptosis and drying of collapsed left globe
 - D. Projectile recovered from right occipital lobe of brain; additional metal fragment recovered from left temporalis muscle

E. Direction: front to back, slightly left to right, and slightly upward

II. Other significant injuries not identified

III. No natural diseases identified

IV. Toxicology

A. Blood ethanol (performed by HCMC on specimen collected 11/15/15 at 01:18): 0.093 g/dL

B. Blood drug and THC screen (performed on HCMC specimen collected 11/15/15 at 01:18): THC positive by immunoassay; immunoassay and mass spectrometry otherwise negative

C. Blood phencyclidine (PCP) (performed on HCMC specimen collected 11/15/15 at 01:18): none detected by GC/MS

D. Blood LSD (lysergic acid diethylamide) trace analysis: (performed on HCMC specimen collected 11/15/15 at 01:18, NMS Labs): none detected

E. Blood cannabinoids panel: (performed on HCMC specimen collected 11/15/15 at 01:18, NMS Labs):

1. 11-Hydroxy Delta-9 THC: 1.0 ng/mL

2. Delta-9 Carboxy THC: 43 ng/mL

3. Delta-9 THC: 2.6 ng/mL

AB/MR: 11/23/15

12/14/2015

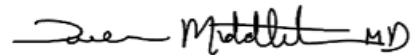
12/14/2015

X



Andrew M. Baker, M.D.
Chief Medical Examiner
Signed by: Andrew M. Baker

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Owen L. Middleton, M.D.
Reviewing Pathologist
Signed by: Owen L. Middleton

ADDITIONAL PERSONNEL PRESENT AT AUTOPSY:

- Special Agent C. Michael Phill II, Minnesota Bureau of Criminal Apprehension
- Special Agent Kevin M. Cane, Federal Bureau of Investigation

IDENTIFICATION:

Positive identification is made by comparison of antemortem and postmortem fingerprints (Minnesota Bureau of Criminal Apprehension).

EXTERNAL EXAMINATION:

The body is that of a normally developed, adequately nourished appearing, 70 inch long, 168-pound male whose appearance is consistent with the reported age of 24 years. Lividity is posterior and dependent, and blanches with very firm pressure. Rigor mortis is beginning to develop in all of the extremities. The protected parts of the body are still slightly palpably warm.

The scalp is covered with long, black hair tightly coiled into dreadlocks. The right iris is brown, and the pupil is round. There are no right-sided bulbar or palpebral conjunctival petechiae. Assessment of the left eye and periorbital tissues is limited by injury (further described below). The external auditory canals are free of blood. The ears are unremarkable. Abundant bloody fluid emanates from the nares. The nares are otherwise patent. The lips are atraumatic (except for medical intervention described below). The nose, right maxilla, and mandible are palpably stable. The teeth appear intact, are native, and are in good repair. A black mustache and goatee style beard are on the face.

The neck is straight, and the trachea is midline. The chest is symmetric. Prominent, hypopigmented stretch striae are on both anterior axillary lines, extending onto the lateral pectoral regions and onto the anterior aspects of each arm. A pair of vertically oriented, 5.5 and 7 cm long co-linear scars is on the left side of the chest extending onto the left epigastrium. The abdomen is flat. A 3 cm long, hyperpigmented scar is on the far right side of the abdomen. The genitalia are those of a normal adult male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The back, buttocks, and anus are unremarkable.

The upper and lower extremities are symmetric and without clubbing or edema. The nails of the hands are trimmed very short and are focally dirty, but are otherwise unremarkable. Approximately thirteen round and linear hyperpigmented scars, ranging from less than 0.5 cm diameter to 3.5 cm long, are scattered across the lateral surface of the right arm, over the posterior right elbow, and on the posterolateral right forearm. A faint, 0.6 cm long, linear scar is on the dorsum of the right wrist. A 3 cm long faint, obliquely oriented scar is on the anterior right wrist. Multiple 0.2 to 0.7 cm maximum dimension oval and linear scars are scattered across the dorsum of the right hand, primarily over the metacarpal-phalangeal joints. Approximately eleven oval to linear scars, ranging from 0.2 cm maximum dimension to 4 cm long, are scattered across the lateral aspect of the left arm and over the left elbow. Five macular, hyperpigmented, oval scars ranging from 0.3 cm to 1.5 cm maximum dimension are scattered over the posterior and medial left wrist. Patchy, nondescript scars are scattered over and around both knees, more pronounced on the right. The nails of the toes are unremarkable.

TATTOOS:

- A 14 cm maximum dimension monochromatic blue tattoo of an animal head-like figure with associated scroll work is on the anterior right forearm.
- A 17 cm maximum dimension monochromatic blue tattoo that appears to be an outline of the state of Minnesota is on the anterior left forearm.

MEDICAL INTERVENTION:

- Hospital bracelets (2), right wrist
- Intravascular catheter, anterolateral right forearm
- Intravascular catheter, right antecubital fossa
- Urinary bladder catheter with attached tubing and collection bag
- Hospital tag, right 2nd toe
- Intravascular catheter, dorsolateral left forearm
- Intra-arterial vascular catheter, left radial artery
- Triple-lumen intravascular catheter, left subclavian
- Gauze and medical tape covering the left eye and cheek
- Electrocardiographic lead, left shoulder
- Dried, curvilinear orange abrasion (2.5 cm long) over the distal sternum, suggestive of cardiopulmonary resuscitation

- Linear, dried brown abrasion (2.5 cm long) extending from the left corner of the mouth and in direct continuity with a faint, 8 cm long line along the left side of the jawline, suggestive of a strap for an endotracheal tube
- Linear, dried brown abrasion (1.5 cm long) extending from the right corner of the mouth, suggestive of a strap for an endotracheal tube
- Healing, focally dried black and scabbed abrasion (1.5 cm maximum dimension) on the lateral aspect (cutaneous and mucosal surfaces) of the right side of the lower lip, consistent with oral endotracheal intubation

RADIOGRAPHS:

Review of the decedent's antemortem CT scan demonstrates a main projectile in the right side of the cranial vault in the region of the right occipital lobe; numerous minute metal fragments project in and around a fractured left orbit.

EVIDENCE OF INJURY:

GUNSHOT WOUND OF THE HEAD:

Just lateral to the left eye, 5 inches below the top of the head, 3¼ inches from the anterior midline (nasal bridge), and 3¼ inches from the left external auditory meatus, is an entrance gunshot wound. The central, circular, 0.9 cm diameter defect is circumferentially surrounded by a 0.1 cm wide pink abrasion collar. Radiating microtears (0.2-0.3 cm long) extend from the defect edges in the 8, 11, 12, 1, and 2 o'clock directions. The defect is centered within an 8 x 8 cm area of powder stippling of the skin that extends from the left cheek onto the inferior left forehead and from the left zygomatic prominence to the upper and lower lids of the left eye.

The left globe is collapsed and proptic due to extensive injury of the orbital bones with injury to, and swelling of, the orbital contents. There is dark red-black drying of the exposed sclera and conjunctiva.

The wound pathway continues through the bony structures of the left cheek/orbit (left zygomatic bone and orbital bones), the left orbital contents, the bony structures of the left anterior cranial fossa, the left frontal lobe of the brain, the optic chiasm and optic nerves, the midbrain, and the right occipital lobe of the brain.

The wound pathway through the brain is pulpified and hemorrhagic, containing multiple pieces of fragmented bone. A thin, diffuse layer of subarachnoid and subdural hemorrhage coats the cerebral convexities and base of the brain. Approximately 50 mL of loosely clotted subdural hemorrhage is over the right cerebral convexity. The cerebral hemispheres are diffusely swollen, with flattening of the gyri, narrowing of the sulci, and compression of the lateral ventricles. The cerebellar tonsils are swollen, softened, and tightly apposed to the brainstem.

There is a comminuted, complex, eggshell fracture of all of the left anterior cranial fossa and medial right anterior cranial fossa bony structures, extending into the lesser sphenoid wing and medial aspect of the greater sphenoid wing on the left. The fracturing of the left anterior cranial fossa radiates into a 5 cm long linear fracture of the right side of the frontal bone, a 7 cm long linear fracture of the left parietal bone, and a 3 cm long linear fracture of the petrous ridge of the left temporal bone. A separate, hemorrhagic, 1 cm maximum dimension aggregate of hairline fractures is in the orbital roof of the right anterior cranial fossa. Four localized 0.4 to 0.7 cm maximum dimension foci (two right and two left) of hemorrhagic hairline fractures are in the squamous portion of each temporal bone, just anterior to the petrous ridges. There is multifocal hemorrhage in the frontal, superior, and right lateral scalp, confined to the periosteum and subgaleal connective tissue and in areas overlying or in continuity with the aforementioned bony injuries; incisions of these areas show no subcutaneous hemorrhage in tissue superficial to the aponeurosis of the scalp. All layers of the scalp are widely hemorrhagic and swollen on the left, in association with the gunshot wound and the related left anterior cranial fossa fractures. There is periorbital ecchymosis (5 cm maximum dimension) of the right eye.

Recovered from the right occipital lobe of the brain, just right of the sagittal midline, is a 2.7 cm maximum dimension copper- and lead-colored projectile. A 0.5 cm maximum dimension lead-colored metal fragment is recovered from the left temporalis muscle.

The overall wound direction, relative to standard anatomic position, is front to back, slightly left to right, and slightly upward.

OTHER INJURIES:

- A pair of obliquely oriented, linear, 3 and 1 cm long dried scratches is on the lateral aspect of the right arm.
- A 1.5 cm long, obliquely oriented, dried linear scratch is on the lateral aspect of the distal left forearm.
- A discontinuous line of vertically oriented scratches, 2.5 cm maximum dimension, is just left of the midline of the upper back.

SOFT TISSUE DISSECTIONS:

BACK: An incision is carried down the midline of the posterior neck and back to the right and left buttocks. Subcutaneous dissection of the neck, shoulders, back, flanks, and buttocks demonstrates no occult contusions.

WRISTS: The anterior aspect of each distal forearm and wrist is vertically incised. Circumferential subcutaneous dissection demonstrates no occult contusions, or other injuries suggestive of restraint. Localized hemorrhage is encountered over the left radial artery, consistent with documented medical intervention. Two cutaneous macular scars on the posterior aspect of the left wrist are also incised, confirming absence of contusions.

INTERNAL EXAMINATION:

HEAD: The brain weighs 1210 g. Coronal sections through uninjured parts of the brain demonstrate sharp demarcation between white and gray matter, without hemorrhage or contusive injury. The atlanto-occipital joint is stable.

NECK: The anterior strap muscles of the neck are homogeneous and red-brown, without hemorrhage. The thyroid cartilage and hyoid are intact. The larynx is lined by intact white mucosa. The thyroid is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries.

BODY CAVITIES: The ribs, sternum, and vertebral bodies are visibly and palpably intact. A measured 150 mL straw-colored fluid is in each pleural cavity, and a measured 100 mL straw-colored fluid is in the peritoneal cavity. The organs occupy their usual anatomic positions.

RESPIRATORY SYSTEM: The right and left lungs weigh 1080 and 1010 g, respectively. The external surfaces are smooth and deep red-purple. The pulmonary parenchyma is diffusely congested, edematous, and virtually airless. No mass lesions or areas of consolidation are present. The pulmonary vascular tree is free of thromboemboli. The tracheobronchial tree is free of blood, edema fluid, or foreign material.

CARDIOVASCULAR SYSTEM: The 345 g heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. The coronary arteries are present in a normal distribution, with a right-dominant pattern. Cross sections of the vessels show no atherosclerotic stenoses and no occlusions. The myocardium is homogeneous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 1.3 and 0.4 cm thick, respectively. The endocardium is smooth and glistening. The aorta gives rise to three intact and patent arch vessels. The renal and mesenteric vessels are unremarkable.

LIVER AND BILIARY SYSTEM: The 1415 g liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains a minute amount of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

SPLEEN: The 160 g spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested.

PANCREAS: The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

ADRENALS: The right and left adrenal glands are symmetric, with bright yellow cortices and gray medullae. No masses or areas of hemorrhage are identified.

GENITOURINARY SYSTEM: The right and left kidneys weigh 140 and 175 g, respectively. Except for rare, minute, focally sunken scars on the left renal cortex, the external surfaces are intact and smooth. The cut surfaces are red-tan and congested, with uniformly thick cortices and sharp corticomedullary junctions. The pelves are unremarkable and the ureters are normal in course and caliber. White and focally hemorrhagic (catheter-related) bladder mucosa overlies an intact bladder wall. The bladder is empty. The prostate is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

GASTROINTESTINAL TRACT: The esophagus is intact and lined by smooth, gray-white mucosa. The stomach contains approximately 300 cc of watery green fluid with numerous multicolored fragments of food-like particulate matter. The gastric wall is intact. The duodenum, loops of small bowel, and colon are unremarkable. The appendix is present.

ADDITIONAL PROCEDURES:

- Documentary photographs are taken.
- Specimens retained for toxicologic testing: vitreous fluid (right eye), femoral blood, urine (from urinary bladder catheter collection bag), liver, and gastric contents.
- Representative tissue biopsies are submitted in formalin for microscopic examination.
- The dissected organs are returned to the body.
- Fingernail clippings are placed in labeled, sealed envelopes.
- Pulled head hairs are placed in a labeled, sealed envelope.
- The recovered projectile and metal fragment are photographed and placed in labeled, sealed envelopes.

MICROSCOPIC EXAMINATION:

BRAIN (1-3): Sections of midbrain, cerebral cortex, and cerebellum are examined. Multiple areas of parenchymal hemorrhage and disruption, consistent with mechanical trauma, are observed; these are particularly prevalent in the midbrain. Hypoxic-ischemic changes are readily observed in many of the Purkinje cells in the cerebellum. No neoplastic or inflammatory changes are seen.

PANCREAS (4): No significant pathologic abnormality.

- LUNG (4):** Congestion and scattered foci of anthracotic pigment deposition; no significant pathologic abnormality.
- HEART (5):** Cross sections of right and left ventricular myocardium show the expected microscopic architecture, without necrosis, inflammation, or scarring.
- ADRENAL (6):** No significant pathologic abnormality.
- LIVER (6):** Congestion; no significant pathologic abnormality.
- SPLEEN (6):** No significant pathologic abnormality.
- THYROID (7):** No significant pathologic abnormality.
- KIDNEY (7):** No significant pathologic abnormality.