

POSTMORTEM EXAMINATION

Hutchins, Halyna

OMI Case Number: 2021-08172

Year of Birth: 1979

Age: 42 years

Date/Time of Death Pronouncement: 10/21/2021 3:37:00 PM

County Pronounced: Bernalillo

Law Enforcement:

Agent:

Central Office Deputy Medical Investigator (FDMI): Eric Hunick

Type of Examination: Autopsy

Date of Examination: 10/22/2021

CAUSE OF DEATH:

Gunshot wound of chest

MANNER OF DEATH:

Accident



Heather S Jarrell M.D.

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PATHOLOGIC DIAGNOSES:

- I. Gunshot wound of chest.
 - A. Entrance, right axillary region, distant range of fire.
 - B. Lethal injuries to chest.
 - 1. Right pneumothorax with leftward mediastinal shift.
 - 2. Right hemothorax.
 - a. Greater than 1 liter blood (UNMH records).
 - 3. Perforation of lower lobe, right lung.
 - C. Thoracic spinal cord laceration, T9.
 - D. Exit, left mid-back.
 - E. No projectile recovered.
 - F. Trajectory: front to back, right to left, downward.
- II. Leiomyomata (benign), uterus.

NARRATIVE SUMMARY AND OPINION:

Ms. Halyna Hutchins, a 42-year-old woman, was fatally shot on a movie set at Bonanza Creek Ranch in Santa Fe, New Mexico, on 10/21/2021, shortly before 13:48. Ms. Hutchins was employed on the movie set as the Director of Photography. According to reports, Ms. Hutchins and the film director were shot during rehearsal on set. EMS responded on scene and Ms. Hutchins was flown to UNMH, where she arrived in asystole at approximately 15:20. Despite medical intervention, Ms. Hutchins was pronounced deceased at 15:37.

A full autopsy was performed at the Office of the Medical Investigator on 10/22/2021. Postmortem computed tomography demonstrated large right pneumothorax with mediastinal shift, as well as a right hemothorax, with medical intervention. Autopsy demonstrated a gunshot entrance wound of the right axillary region, that entered the right chest cavity and perforated the right lung, exited the right chest, injured the thoracic spinal column and the thoracic spinal cord, and exited the left aspect of the back. The absence of visible soot on the clothing and the entrance wound is most consistent with a distant range of fire. The direction of wounding is front to back, right to left, and downward.

No significant natural disease findings were present. Toxicology testing of postmortem femoral blood was negative for alcohol and common drugs of abuse.

Review of case supplemental reports provided by law enforcement demonstrated that a firearm (a .45 Long Colt single-action revolver) was loaded by the armorer, handed to the assistant director, and then subsequently handed to the actor on set. According to reports, the firearm was believed to be loaded with dummy rounds for the rehearsal. The actor reportedly raised the firearm toward the camera as part of the rehearsal, which subsequently discharged and struck Ms. Hutchins, as well as the director, who was reportedly standing behind Ms. Hutchins. The projectile was later recovered from the director at a hospital.

A firearms/toolmarks examination was performed by the FBI Laboratory, which was issued on 7/26/2022, that demonstrated that the .45 revolver functioned normally when tested. Additionally, the projectile recovered from the director (Mr. Joel Souza) was a .44/.45 caliber lead bullet that could not be compared to the firearm secondary to damage. Thirdly,

examination of a .45 Colt cartridge case demonstrated that it had been fired in the revolver examined.

Death was caused by a gunshot wound of the chest. Review of available law enforcement reports showed no compelling demonstration that the firearm was intentionally loaded with live ammunition on set. Based on all available information, including the absence of obvious intent to cause harm or death, the manner of death is best classified as accident.

EXTERNAL EXAMINATION

GENERAL

An autopsy is performed on a body identified as that of Hutchins, Halyna at the Office of the Medical Investigator, State of New Mexico, on 10/22/2021, beginning at 1030. The body is that of a well-developed, well-nourished, adult female, who weighs 55.2 kg, measures 162 cm long, has a body mass index of 21 kg/m² and appears compatible with the reported age of 42 years. Encircling the left wrist is an identification band labeled with the decedent's name. The body is received unclad and partially covered by a white hospital blanket. The hands are bagged with brown paper bags that are secured at the wrists with tape. Personal effects are listed in the "Personal Effects" inventory.

POSTMORTEM CHANGES

The body is cold subsequent to refrigeration. Rigor mortis is fully fixed. Blanchable, purple livor mortis extends over the posterior surfaces of the body except in areas exposed to pressure. The body is without significant decomposition changes.

EXAMINATION

Head and neck -

The scalp hair is brown with blonde coloring distally, and is short. The irides are brown. The corneas are translucent and a contact lens is present on the right eye. The sclerae are white and conjunctivae are clear. No petechial hemorrhages are identified on the sclerae, bulbar conjunctivae, facial skin or oral mucosa. The nose and ears are normally formed. The decedent has no facial hair. The maxillary dentition is natural. The mandibular dentition is natural. The teeth are in adequate condition. The neck is unremarkable.

Torso -

The thorax is well-developed and symmetrical (see evidence of injury). The abdomen is flat. The spine is normally formed. Female genitalia demonstrate adult development and are unremarkable. The anus is free of lesions.

Extremities -

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

MARKS, SCARS, COSMETIC PIERCINGS

Scars are observed in the following locations: abdomen.

The following cosmetic piercing(s) are identified: right ear, left ear, umbilicus.

TATTOOS

There are no readily apparent tattoos.

MEDICAL INTERVENTION

A needle thoracostomy is present on the right anterior chest. Yellow abrasions consistent with CPR are present on presternal region. A sutured clamshell thoracotomy incision is present on the right and left chest at the intercostal space of ribs 5 and 6. A 2.5 cm defect of the upper lobe of the left lung is present. A pulse oximeter is present on the left index finger. A wound seal is present on the left aspect of the back. A needle puncture is present in the right atrium. An endotracheal tube is present, which demonstrates esophageal placement (see CT examination section). The left chest cavity contains 30 ml of bloody fluid. The pericardial membrane shows changes status post intraoperative resuscitation.

Intravascular catheters are in the following locations: left internal jugular vein, right antecubital fossa, left antecubital fossa, right wrist, left shin intraosseous needle.

EVIDENCE OF INJURY

GUNSHOT WOUND OF CHEST

ENTRANCE, RIGHT AXILLARY REGION, DISTANT RANGE OF FIRE:

Located on the right axillary region, 18.5 cm right of the anterior midline and 35.0 cm from the top of the head at vertex, is a 2.0 x 1.3 cm elliptical gunshot entrance wound with a 0.5 x 0.9 cm abrasion located from 1-2 o'clock and a 1 mm marginal abrasion in the remaining marginal aspect of the wound. A 2.0 x 1.0 cm abrasion is present lateral to the entrance wound, located on the anterior shoulder region. A 2.0 x 0.3 cm abrasion and a 2.0 x 6.5 cm blue/purple contusion are present medial to the entrance wound. Soot, unburned gunpowder particles, and gunpowder stippling are not identified.

PATHWAY:

The projectile created a hemorrhagic wound path through the skin and subcutaneous soft tissues of the right axillary region, entered the right chest cavity through lateral intercostal space of ribs 4 and 5 and fractured right rib #4, perforated the lower lobe of the right lung, and exited the right chest cavity posteriorly and just lateral to the vertebral column, through the intercostal space of ribs 8 and 9, and fractured right rib #8 posteriorly. The projectile traveled through the 8th thoracic vertebral body and fractured the facet joints, lacerated the spinal cord at the 9th thoracic vertebra level (leaving the anterior spinal artery intact), and traveled through the soft tissue of the back prior to exiting.

Associated injuries include 23 ml of blood in the right chest cavity, status post surgical intervention (The discrepancy between estimated blood loss in UNMH record, quantity visualized on postmortem CT, and measured amount during autopsy is likely secondary to prone placement prior to internal examination.). Intercostal hemorrhage is present as follows: right lateral ribs 3 and 4; right lateral ribs 4 and 5; right posterior ribs 6-10; left posterior ribs 5-10. Subdural and epidural hemorrhage are present surrounding the thoracic spinal cord.

GUNSHOT EXIT, LEFT MID-BACK:

Located on the left mid-back, just inferior to the scapula, 6.0 cm left of the posterior midline and 40.0 cm from the top of the head at vertex, is a 0.6 cm lacerated gunshot exit wound, with a 0.2 cm wide, 0.9 cm abrasion located from 12-3 o'clock. A 6.5 x 5.0 cm irregular purple contusion surrounds the exit wound, which demonstrates an approximate 1.5 cm region of void immediately surrounding the contusion.

PROJECTILE:

None recovered.

TRAJECTORY:

The direction of wounding is front to back, right to left, and downward.

CLOTHING:

A jacket demonstrates defects that correspond to the gunshot entrance and exit wounds. Soot is not apparent on the area that corresponds to the gunshot entrance wound defect.

INTERNAL EXAMINATION

GENERAL

See the "Evidence of Injury" section.

BODY CAVITIES

No adhesions are present in any of the body cavities. All body organs are in normal anatomic position, unless otherwise noted. The serosal surfaces are smooth and glistening.

CENTRAL NERVOUS SYSTEM

The brain weighs 1275 grams. The dura mater and falx cerebri are intact and without abnormality. The leptomeninges are thin and transparent. There is no epidural, subdural or subarachnoid hemorrhage. The cerebral hemispheres are symmetrical. The cortices demonstrate no widening or flattening of gyri and sulci. The structures at the base of the brain and the cranial nerves are free of abnormality. The blood vessels are free of abnormality. Sections through the cerebral hemispheres reveal no lesions within the cortex, subcortical white matter or deep parenchyma of either hemisphere. The cerebral ventricles are of normal caliber. Sections through the brainstem and cerebellum reveal no lesions.

The spinal cord is removed by the anterior approach. See evidence of injury.

NECK

Examination of the soft tissues of the neck, including the strap muscles and large vessels, reveals no abnormalities aside from medical intervention changes. The hyoid bone and larynx are intact. The tongue is normal.

CARDIOVASCULAR SYSTEM

The heart weighs 245 grams and is conical in shape. The pericardial sac is free of significant fluid or adhesions. The pericardial surfaces are smooth and glistening.

The coronary arteries arise normally and follow the distribution of a co-dominant pattern. Maximum percentages of coronary arterial stenosis by atherosclerotic plaques are as follows: left main coronary artery- 0%, left anterior descending coronary artery- 0%, left circumflex coronary artery- 0%, and right main coronary artery- 0%. There are no coronary arterial thrombi, plaque hemorrhages or dissections. The coronary ostia are patent and appropriate in their origin.

The following circumferential valve measurements are obtained: tricuspid valve- 12.5 cm; pulmonic valve- 7.7 cm; mitral valve- 9.0 cm; aortic valve- 5.8 cm. The valves are morphologically normal and without appreciable abnormality.

The myocardium is dark red-brown, firm, and free of focal or regional fibrosis, erythema, pallor or softening. The atrial and ventricular septa are intact, and the septum and free walls are free of muscular bulges. The foramen ovale is closed. The chambers are not dilated.

The left ventricle measures 1.1 cm and the right ventricle measures 0.4 cm in thickness, as measured 1 cm below the respective atrioventricular valve annulus. The interventricular septum measures 0.9 cm in thickness.

The aorta and its major branches arise normally and follow the usual course without significant atherosclerosis. The orifices of the major aortic vascular branches are patent. The vena cava with its major tributaries are patent, return to the heart in the usual distribution, and are unremarkable.

INTERNAL EXAMINATION

PULMONARY SYSTEM

See evidence of injury. The right and left lungs weigh 255 and 265 grams, respectively. The upper and lower airways are unobstructed, with smooth, yellow-tan mucosal surfaces. The lungs are atelectatic. The pleural surfaces are smooth, glistening and unremarkable, with the exception of the injured right lung. The pulmonary parenchyma is dark red-purple and the cut surfaces exude slight amounts of blood and frothy fluid. The pulmonary arteries are normally developed without atheromas. There is no saddle embolus on in situ examination of the pulmonary trunk.

HEPATOBILIARY SYSTEM

The liver weighs 1260 grams. The hepatic capsule is smooth, glistening and intact, covering red-brown parenchyma that is without nodules. The gallbladder contains green-brown bile without stones. The extrahepatic biliary tree is patent.

GASTROINTESTINAL SYSTEM

The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is unremarkable with the usual rugal folds and the lumen contains 200 ml of thick, viscous fluid with food particles. The serosa of the small bowel is smooth and glistening. There are no lesions of the duodenal or colorectal mucosa. The colon contains formed stool. The appendix is absent. The pancreas has a normal tan lobulated appearance.

GENITOURINARY SYSTEM

The right and left kidneys weigh 100 and 110 grams, respectively. The renal capsules are smooth, thin and semitransparent and strip with ease from the underlying smooth, light brown, firm cortical surfaces. The cortices are of normal thickness and well-delineated from the medullary pyramids. The calyces, pelves and ureters are non-dilated and free of stones. The urinary bladder contains 90 mL of clear yellow urine; the bladder mucosa is gray-tan and smooth.

REPRODUCTIVE SYSTEM

The uterus is non-gravid and contains multiple small leiomyomatous nodules that are approximately 0.5 cm or less. The cervix, fallopian tubes, and vagina are unremarkable. The left ovary contains a 2.0 cm smooth-walled cyst containing clear, serous fluid. The breast tissue has the usual fibrous and adipose mixture.

RETICULOENDOTHELIAL SYSTEM

The spleen weighs 175 grams and has a smooth intact capsule covering red-purple, parenchyma. The splenic white pulp is prominent. The bone marrow (rib) is red-purple. There is no prominent lymphadenopathy.

ENDOCRINE SYSTEM

The pituitary gland is of normal size. The thyroid gland is of normal position, size and texture. The adrenal glands have normal cut surfaces with yellow cortices and gray medulla.

MUSCULOSKELETAL SYSTEM

The bony framework, supporting musculature and soft tissues, are normally formed. See evidence of injury.

INTERNAL EXAMINATION

OTHER EXAMINATIONS

The following examination is performed:

A right axillary region dissection was performed, which showed no injury to the brachial plexus, subclavian artery, subclavian vein, axillary artery, or axillary vein.

ADDITIONAL STUDIES

COMPUTED TOMOGRAPHY

Support structures

ET tube terminates in mid-esophagus. A right atrial intracardiac central line placement is present. Needle thoracostomy enters the right chest and is placed shallowly, terminating in the right chest wall. Left internal jugular catheter terminates in the proximal SVC. Right antecubital IV. Left tibial IO.

Head, Neck, and Brain

Head- Brain is symmetric without mass or midline shift. No intra or extra-axial blood or fluid collection. Cerebral edema. The calvarium is intact.

Osseous structures- No displaced fracture or osseous lesion.

Soft tissues- No focal abnormality.

Chest

Lungs and Mediastinum - Large right greater than left pneumothorax with leftward mediastinal shift. Bilateral right greater than left hemothorax with mixed density blood. Bilateral collapsed atelectatic lungs.

Osseous structures- T8 comminuted fracture with ballistic fragments and air traversing the central canal in a right to left and front to back trajectory. Fracture involves the posterior elements with involvement of the left T7-8 facet joint and the right T7-8 and T8-9 facet joints. Spinous process fractures at T7 and T8. Minimally displaced inferior endplate fracture of T7. Right 8th posterior rib fracture at the costovertebral junction. Right anterior 4th rib fracture.

Soft tissues- Soft tissue defect of the midline of the chest. Extensive right anterior chest wall and axillary soft tissue injury with gas.

Abdomen and Pelvis

Liver- No focal lesion.

Gallbladder- No focal lesion.

Spleen- No focal lesion.

Pancreas- No focal lesion.

Adrenal glands- No focal lesion.

Kidneys- No focal lesion.

Stomach- No focal lesion.

Large and small bowel- No focal lesion.

Retroperitoneum- No focal lesion.

Urinary bladder- No focal lesion.

Other pelvic contents-Tampon present.

Osseous structures- No displaced fracture or osseous lesion.

Soft tissues- No focal abnormality.

Imaged extremities

Osseous structures- No displaced fracture or osseous lesion.

ADDITIONAL STUDIES

Soft tissues- No focal abnormality.

MICROSCOPY

Review of microscopy reveals the following:

LIVER: Normal appearing portal tracts and hepatocytes present. Perivenular pallor present.

LUNG: Atelectatic lung with foci of intraalveolar erythrocytes present.

KIDNEY: Normal appearing glomeruli, tubules, and arterioles.

HEART: Normal appearing myocytes. No diagnostic abnormality.

HIPPOCAMPUS: Slide is overstained, but few red neurons are present, demonstrated by eosinophilia with pyknotic nuclei and inconspicuous nucleoli.

SPINAL CORD: Fragmented section with intraparenchymal hemorrhage present within the gray and white matter.

ANCILLARY STUDIES

Postmortem blood toxicology results are available by separate report.