



County of San Diego

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AUTOPSY REPORT

Name: ZEHE ZHANG **ME#:** 2018-1187
Place of death: Vulcan Mountain **Age:** 24 Years
N 33 08 03 W 116 34 41
Julian, CA 92036 **Sex:** Male
Date of death: May 10, 2018; 2037 Hours
Date of autopsy: May 15, 2018; 0930 Hours

CAUSE OF DEATH: MULTIPLE BLUNT FORCE INJURIES

Contributing: THERMAL INJURIES

MANNER OF DEATH: ACCIDENT

AUTOPSY SUMMARY:

- I. Multiple blunt force injuries:
- II. Multiple thermal injuries (no soot in airway).
- III. Natural disease:
 - A. Proximal right coronary artery with medial thickening of at least 65% narrowing and focal wall injury.
- IV. Toxicological testing not contributory.

OPINION: According to the investigative information, the decedent was a male involved in a plane crash on Vulcan Mountain in Julian. The crash was reported on May 10, 2018 at 2037 hours with an accompanying brush fire. The site was unable to be accessed until May 11, 2018 due to weather and rugged terrain. Two other males were found in the wreckage (San Diego Medical Examiner's case number 2018-01188 and 2018-01189). Death was confirmed at the scene without medical intervention due to extensive thermal injuries. The decedent was found amongst the plane wreckage. The plane was not intact and the wreckage was spread out. There were no reports of a distress call at the time of the incident. The plane was reported to be a twin engine Beechcraft Duchess with tail number "N803FC" that belonged to the Scandinavian Aviation Academy Flight School at Gillespie Field. The plane was reportedly simulating a cross-country flight and was returning from Apple Valley. On board were reported to be a flight instructor and two male students.

The autopsy documented a male with extensive charring over 100% of the body surface area. There were numerous blunt force injuries identified. There were no significant amounts of soot in the airways. Although one coronary artery showed medial thickening, there was no associated chronic inflammation, atherosclerotic change, or calcification. Therefore, the significance of this lesion is unknown and no definitive correlation can be made to the timing of the aircraft incident.

Toxicological testing detected no ethanol or common drugs of abuse in the urine.

Based on the autopsy findings and the circumstances surrounding the death, as currently understood, the cause of death is **multiple blunt force injuries** with **thermal injuries** contributing, and the manner of death is **accident**.

ROBERT STABLEY, M.D.
Deputy Medical Examiner

Date signed:

The autopsy was performed at the Office of the San Diego County Medical Examiner on May 15, 2018 beginning at 0930 hours.

IDENTIFICATION: The body is identified by a Medical Examiner's identification tag bearing the name "Plane Doe #1" and the Medical Examiner's case number affixed to the outside of the body transfer pouch.

WITNESSES: Assisting with the autopsy is Forensic Autopsy Specialist Stephen Hannum. There are no outside observers.

CLOTHING AND PERSONAL EFFECTS: No clothing or personal effects are present at autopsy. There is evidence of charred remnants of clothing in the body transfer pouch and around the body but is not identifiable.

EVIDENCE OF MEDICAL INTERVENTION: There is no evidence of medical intervention identified at autopsy.

EXTERNAL EXAMINATION

Injuries are fully described in the "Evidence of Injury" section below. The body is that of male with a body weight of 93 pounds. The body is well preserved, with the exception of extensive thermal injury, is cold, and has not been embalmed.

The head is injured. The scalp hair is not identified. There are extensive thermal injuries of the face, which precludes examination of the eyes. With the exception of thermal charring, the external auditory canals, external nares, and oral cavity are free of foreign material. The teeth are natural.

The chest is symmetrical. The abdomen is flat and soft.

The extremities are essentially symmetric and normally formed. The fingernails and toenails are not identified.

The genitalia are those of an adult male extensive charring.

SCARS AND OTHER IDENTIFYING MARKS: Examination of the body for identifying marks and scars is not possible due to extensive thermal charring of the body.

TATTOOS: Examination for tattoos is not possible due to extensive thermal injuries and charring.

POSTMORTEM CHANGES: The body is cold. Rigor mortis and livor mortis are not evaluable due to extensive injury.

EVIDENCE OF INJURY

All injuries are described based on standard anatomic position. The order of injuries does not correlate with severity.

BLUNT FORCE INJURIES OF HEAD:

There are multiple linear fractures of the right middle cranial fossa of the skull. There are approximately 25 ml of subdural hemorrhage. There is focal subarachnoid hemorrhage over the right hemisphere of the brain.

BLUNT FORCE INJURIES OF TORSO:

There are 200 ml of thermally clotted blood in the pericardial sac. There are superficial lacerations with a subcapsular hematoma on the dome and lateral aspects of the right lobe of the liver. There are extensive fractures of the right lateral chest with associated hemorrhage. There are fractures of the right and left superior pubic rami of the pelvis.

BLUNT FORCE INJURIES OF EXTREMITIES:

The left upper extremity appears to have been traumatically amputated, just below the left elbow complex. There appears to be traumatic amputations of the right leg and the left thigh, just above the left knee complex.

THERMAL INJURIES:

There is charring of the body over 100% of body surface area. The brain is exposed due to thermal fractures of the calvarium. There is extensive thermal injury of the torso to expose soft tissue and chest contents. Many of the internal organs show thermal coagulation. The thyroid gland is not identified due to extensive thermal injury and exposure of the neck contents. No soot is in the trachea. There is a pugilistic attitude of the right and left elbow complexes.

INTERNAL EXAMINATION

BODY CAVITIES: See "Evidence of Injury." The pleural and peritoneal cavities contain no adhesions. All body organs are present in their normal anatomical position. The diaphragm is intact.

CARDIOVASCULAR SYSTEM: See "Evidence of Injury." The 270 gram heart has a normal shape and is contained in an intact pericardial sac. The epicardial surface is smooth with minimal fat investment. The coronary arteries arise normally with widely patent ostia and are present in a normal distribution, with a right-dominant pattern.

Cross sections of the coronary arteries demonstrate focal wall thickening of the proximal right coronary artery with luminal narrowing of approximately 50-65%. The myocardium is homogenous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left ventricle, interventricular septum, and right ventricle are 1.2 cm, 1.2 cm, and 0.2 cm thick, respectively. The endocardium of the heart is smooth and glistening. The aorta gives rise to three intact and patent arch vessels and contains minimal atherosclerosis. The renal and mesenteric vessels are unremarkable. The pulmonary arteries are normally developed, patent and without thrombus or embolus.

RESPIRATORY SYSTEM: The upper airway is clear of debris and foreign material; there is no evidence of soot in the airways. The mucosal surfaces are smooth, yellow-tan and unremarkable. The pleural surfaces are smooth, glistening and unremarkable bilaterally. The right lung weighs 390 grams. The left lung weighs 270 grams. A small amount of anthracotic pigment is seen. No focal lesions are noted.

HEPATOBIILIARY SYSTEM: See "Evidence of Injury." Where uninjured, the 940 gram liver has an intact smooth capsule covering a congested, tan-brown parenchyma with no focal non-traumatic lesions noted. The gallbladder contains approximately 5 ml of green-brown, mucoid bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent without evidence of calculi.

LYMPHORETICULAR SYSTEM: The 70 gram spleen has a smooth, intact capsule covering red-purple, moderately firm parenchyma; the lymphoid follicles are unremarkable. Lymph nodes in the hilar, periaortic and iliac regions are not enlarged.

GASTROINTESTINAL SYSTEM: The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds and the lumen contains no significant amounts of material. No pills, pill fragments, or capsules are present. The small bowel and colon are unremarkable. The pancreas has a normal pink-tan lobulated appearance. The appendix is grossly unremarkable.

GENITOURINARY SYSTEM: The right kidney weighs 70 grams; the left 70 grams. The renal capsules are smooth and thin, semi-transparent and strip with ease from the underlying smooth, red-brown cortical surfaces. The cortices are sharply delineated from the medullary pyramids, which are red-purple to tan and unremarkable. The calyces, pelves and ureters are unremarkable. White bladder mucosa overlies an intact bladder wall. The bladder contains approximately 20 ml of cloudy, yellow urine. The prostate gland and seminal vesicles are without note. The testes are palpably unremarkable.

ENDOCRINE SYSTEM: The pituitary gland is grossly unremarkable. The thyroid gland is not identified due to extensive thermal injury. The right and left adrenal glands are

intact with bright yellow cortices and red-brown medullae; no masses or areas of hemorrhage are identified.

NECK: The anterior strap muscles of the neck are homogenous and red-brown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa.

MUSCULOSKELETAL SYSTEM: See "Evidence of Injury." No non-traumatic abnormalities of bone or muscle are identified.

HEAD AND CENTRAL NERVOUS SYSTEM: See "Evidence of Injury." The dura mater and falx cerebri are intact. There is no epidural hemorrhage present. The leptomeninges are thin and delicate. The cerebral hemispheres have an unremarkable pattern of gyri and sulci. The blood vessels at the base of the brain are without significant atherosclerosis. The brain weighs 980 grams. Coronal sections through the cerebral hemispheres reveal no non-traumatic lesions. The ventricles of the brain are of normal size and contain clear cerebrospinal fluid. Transverse sections through the brainstem, cerebellum, and upper spinal cord reveal no non-traumatic lesions. The tongue is free of bite marks, hemorrhage, or other injuries.

SPECIMENS RETAINED

TOXICOLOGY: The following specimens are submitted for toxicology: urine, liver, and spleen. A toxicology kit for the Federal Aviation Administration (FAA) is collected. In addition, psoas muscle and blood clot from the pericardium are collected for the San Diego Sheriff's Department lab.

HISTOLOGY: Portions of tissues and major organs are retained in formalin. Sections of coronary arteries are submitted for microscopic examination.

PHOTOGRAPHS: Digital identification photographs, overalls, and photographs of selected findings are taken.

RADIOGRAPHS: Full-body X-rays are performed.

MICROSCOPIC EXAMINATION

CORONARY ARTERY (slide #1: 2 sections): Two sections of artery showing eccentric thickening of the tunica media with at least 50% luminal narrowing. There are no atherosclerotic changes including chronic inflammation or calcification. There is focal full-thickness injury of the vessel wall with extravasated red blood cells. One section is tangentially sectioned.

RS:lcb

D: 6/7/18 T: 6/11/18

Rev. 7/25/18 clb



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TOXICOLOGY REPORT

Name: **PLANE DOE #1,**
Medical Examiner Number: **2018-01187**
Date of Death: **5/10/2018**
Time of Death: **2037**
Pathologist: **Robert Stabley, M.D.**
Specimens Received: **Spleen, Liver, Urine**
Date Specimens Received: **5/16/2018**

<u>Test Name (Method of Analysis)</u>	<u>Specimen Tested</u>	<u>Result</u>
<u>Alcohol Analysis (GC/FID-Headspace)</u>	Urine	
Alcohol (Ethanol)		Not Detected
Acetone, Isopropanol, Methanol		Not Detected
<u>Drugs of Abuse Screen (ELISA)</u>	Urine	
Amphetamines		Not Detected
Benzodiazepines		Not Detected
Buprenorphine		Not Detected
Cannabinoids		Not Detected
Carisoprodol		Not Detected
Cocaine metabolites		Not Detected
Fentanyl		Not Detected
Methadone		Not Detected
Opiates		Not Detected
Oxycodone		Not Detected
Phencyclidine (PCP)		Not Detected
Zolpidem		Not Detected

Unless otherwise requested, all specimens will be destroyed six (6) months after the closure of the case by the Medical Examiner
End Results

Comment:

There was no suitable specimen available for the analysis of carboxyhemoglobin.

Approved and Signed: _____
05/24/2018 Iain M. McIntyre, Ph.D.
Forensic Toxicology Laboratory Manager