

REPORT OF AUTOPSY

Decedent: Carlos Adrian Ingram-Lopez DOB 1/29/1993 DOD 4/21/2020
Date of Examination: April 24, 2020 Time of Examination: 1450
Place of Examination: Family Burial and Cremation, Mesa, AZ
Permission for Examination Granted by: Iris Lizarraga
[REDACTED]

PATHOLOGICAL DIAGNOSES

- I: Recent Traumatic Injuries**
 - a) Abrasions**
 - a. Bridge of Nose**
 - b. Left Forehead, Two**
 - c. With Associated Contusion Right Forehead**
 - d. Linear Pattern, Right arm**
 - e. Bilateral Prepatellar**
 - f. Dorsum of Right Hand**
 - b) Restraint Style, Both Wrists with Deeper Abrasions at Margins**
- II: Pulmonary Congestion**
- III: Passive Congestion of Liver with Hepatic Steatosis**
- IV: Toxicology Test Results Pending**

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Pathologist

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External Examination

The body arrives in a vinyl pouch on which is written the name Ingram Lopez Carlos and the Pima County Medical Examiner case number 20-1275. There is a matching identification band on the left ankle. The unembalmed and previously autopsied body is that of an adult well developed and well-nourished Caucasian man, 74 inches in length and weighing an estimated 230 pounds. Rigor mortis is passed. Livor mortis is purple, posterior and fixed with mild to moderate cervicofacial cyanosis and congestion. The scalp hair is dark and cut in a short burr style. There is a sutured linear incision of the scalp beneath which is a sawn calvarium and empty cranial vault. There is good preservation of facial and cranial symmetry. There are abrasions of the forehead and nose described below. The irides are brown. Both globes are partially deflated. Pupils are 0.4cm in diameter each. There are no scleral or conjunctival lesions. There are no lesions of external auditory canals or nares. Ear lobes have vertical creasing. There is a short dark brown mustache, lower lip beard and chin beard. Dentition is natural. There are no oral mucosal lesions. There is a sutured Y-shaped thoracoabdominal incision. Thorax appears symmetrical. The abdomen is mildly protuberant. There are no significant skin scars. External genitalia include a non-circumcised penis. Extremities are paired and symmetrical with no moderate cyanosis of the fingernail beds. There is an oblique linear abrasion of the right upper arm. There is no significant cyanosis, clubbing, edema or deformity. There is a large pattern of tattoo "AMBITION" and "IV:XX" and several smaller Roman number tattoo patterns on the medial surface of the upper right arm distal to the axilla. Posterior aspects of the trunk are without notable injury. General appearance is compatible with the reported age of 27 years.

External Evidence of Trauma

There are numerous recent abrasions.

- Left forehead extending horizontally and laterally from the midline and to the left ranging up to 1 ½ by ½ inches
- Left forehead above the mid-brow ranging up to 1 x ¾ inch
- Left Forehead nearer the hairline ranging up to ¾ inch in greatest dimension
- 1 ½ inch linear abrasion over bridge of the nose
- 6 ¼ inch oblique linear abrasion of lateral surface of right upper arm coursing downward and lateral
- Irregular ovoid superficial abrasions of both left and right prepatellar skin
- Superficial linear pretibial abrasion of right leg distal to patella
- Paired linear circular pattern abrasions consistent with cuff restraints of both wrists with deeper extension and abrasion of ulnar surface of right wrist and associated superficial linear abrasion of radial surface of left wrist
- Two small dried linear abrasions over second metacarpal of right hand

Internal Evidence of Trauma

- No specific internal traumatic injuries are noted.

Identifying Features

- Tattoo of medial surface of the upper right arm distal to axilla

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Internal Examination

The body is opened utilizing the previous Y-shaped thoraco-abdominal incision. Subcutaneous adipose tissue ranges up to 4cm in thickness at the level of the umbilicus. All viscera are contained within a red plastic biohazard bag. There is no identified area of hemorrhage or specific trauma of the thorax or abdominal walls. The viscera have been sectioned and placed within the bag.

There is mild hemorrhagic fluid accumulation in the body cavities posterior to the viscera bag. Serous surfaces appear smooth and glistening. The diaphragmatic leaflets have been excised but appear to be at the level of the anterior 6th ribs. The various organs are removed from the plastic bag and re-examined then returned to the bag. The various organs and their weights are summarized below.

Heart

The previously excised and incised heart includes 390 grams of muscle. The epicardial surfaces are smooth. The coronary arteries arise and are distributed in the usual fashion with a series of transverse incisions exposing patent lumina and no gross thrombi. Multiple step sections of myocardium reveal no localizing areas of softening, hemorrhage, or gross scarring. The endocardial surfaces are smooth and glistening. The ventricular thicknesses are: left 1.8cm; right 0.8cm, and interventricular septum 1.5cm. The valves have soft pliable leaflets.

Great Vessels

The aorta is of normal caliber with essentially normal elasticity. Atherosclerotic changes are mild.

Lungs

The residual lung tissue weighs: left 370gm and right 410gm. Both lungs appear mildly congested. They are moderately well expanded with smooth and glistening pleural surfaces. There are no localizing areas of induration, consolidation, hemorrhage, or gross infarction. There are no cavitory lesions. The tracheobronchial tree is unobstructed and lined by dark red mucosal surfaces. The pulmonary arteries are patent. The perihilar lymph nodes are not remarkable.

Neck Organs

The upper airway is unobstructed. There is no glottic or epiglottic edema. The mucosal surfaces are glistening and red-tan. The hyoid bone and thyroid cartilage appear normal with prior postmortem incision. The thyroid gland is dark red-tan and granular with no localizing gross masses. The upper esophagus and oropharynx are patent with no gross mucosal lesions. The cervical spine is structurally intact.

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Spleen

80 grams of congested spleen is retrieved. The capsule is translucent and glistening and finely wrinkled with a series of postmortem incisions. No localizing lesions are noted on cut surfaces. The red and white pulp structures are readily identified.

Liver

There are multiple slabs of liver tissue with an aggregated mass of 2300gm. The liver is dome-shaped, red-brown and firm with a smooth and glistening capsule. The parenchyma cuts with the usual resistance. There are no gross localizing lesions, hemorrhages or zones of scarring on multiple cut surfaces. The intra and extra-hepatic biliary ducts are patent. There is grossly diffuse congestion of the liver.

Adrenal Glands

The adrenal glands are not remarkable. No areas of hemorrhage or cortical nodules are noted on external or cut surfaces.

Pancreas

The pancreas is lobular and firm with no gross hemorrhages or scarring.

Kidneys

The kidneys have been previously removed with linear incisions of the cortex to the pelvis. The combined weight of retrieved tissue is 240gm. The capsules have been stripped from smooth cortical surfaces. There are no areas of gross cortical scarring. There is good cortico-medullary demarcation with cortex averaging 0.45cm in width. There are no cortical cysts present. There are no gross abnormalities of the pyramids, of the calyceal systems, or of the renal vessels. The ureters are patent and of normal caliber.

Pelvic Organs

The urinary bladder has been removed and incised. The mucosal surfaces are pink-tan and wrinkled. The trigone is patent. The prostate is grossly normal. Seminal vesicles are neither dilated nor scarred.

Gastrointestinal Tract

There are no gross lesions or hemorrhages of stomach, small bowel or colon.

Musculoskeletal System

There are no gross abnormalities of the major muscle groups. The axial and appendicular skeleton is grossly normal.

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Skull and Cranial Contents

The scalp has been reflected in the usual manner. There are no gross areas of abrasion, contusion, or laceration. The calvarium is grossly intact with no areas of fracture. It is of normal thickness. The brain tissue has been previously removed and serially sectioned. No gross areas of hemorrhage or unusual mass formation is observed. There is typical grey / white matter demarcation of the cerebral hemispheres. There are areas of mild congestion of the outer surfaces of cortical gyri. There are serially sectioned portions of cerebellum and brain stem present.

Toxicology Testing

Both eyes have been previously evacuated and only a trace of vitreous fluid remains. No hemorrhages are noted.

A sample of peripheral blood from the legs is mixed with residual blood from both arms. The integrity of the blood specimen is compromised and testing if performed is likely to be compromised. Specimen of blood is obtained for possible testing. The specimens obtained during the original autopsy are likely more reliable.

Gross

D/T April 24, 2020

MICROSCOPIC DESCRIPTIONS

Heart

Coronary arteries are widely patent with no thrombi or active vasculitis. The myocardial muscle cells are fairly uniform in size with no active inflammation, necrosis or scarring. A few penetrating branches of coronary vessels are congested.

Lung

Alveoli are filled with poorly cellular edema fluid or erythrocytes with congestion of the interalveolar capillaries. There are widely scattered clumps of anthracotic pigment and hemosiderin laden macrophages in the tissue. Several of the pulmonary vessels are surrounded by a thin band of small lymphocytes. No thrombi or emboli are noted. No areas of active inflammation or granulomata are identified. Several bronchi retain normal epithelial linings.

Thyroid Gland

There is mild diffuse interfollicular congestion of the thyroid. Follicles are filled with uniform eosinophilic colloid with no areas of atypia or active inflammation.

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Spleen

There is diffuse congestion of the red pulp stroma of the cortex against a background of widely scattered small lymphocytes. No trauma is identified. White pulp centers are numerous and have distinct borders. There is no evidence of chronic inflammatory changes.

Liver

There are numerous fat vacuoles of variable sizes throughout the liver. Hepatocytes are separated by widened and congested sinusoids with several hemosiderin pigment deposits along the sinusoids. No active inflammation or scarring is identified. There are a few small lymphocytes around the portal tracts.

Kidney

The glomeruli have richly vascular capillary tufts with no significant inflammation or scarring. The only inflammation observed consists of a few small lymphocytes in the peripheral renal cortex. Proximal and distal tubules are intact with no casts or inflammation. There is mild congestion of renal vessels.

Brain

No significant unusual features are noted in sections of cerebral cortex or cerebellum. There are a few cerebral arterioles which are surrounded by loosely arrayed erythrocytes. There are no areas of hemorrhage or active inflammation identified. No abnormal neuron losses are noted.

SUMMARY

Final determination of cause of death awaits toxicology testing results. In the meantime, autopsy findings are consistent with acute cardiorespiratory failure with visceral congestion. These occurring in the context of signs of struggle /restraint raise the issue of possible positional asphyxia. Scene photos and toxicology test results may permit more definitive explanation of this man's death.

April 29, 2020

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AMNDED REPORT OF AUTOPSY

Basis for Amendment

Original autopsy findings were made available including the original organ weights, observations, and toxicology test results.

Original Exam Organ Weights		Significance
Heart	520 grams	Hypertrophy
Left Lung	780 grams	Congestion approaching twice normal
Right Lung	840 grams	
Liver	3000 grams	At least double normal (Steatosis)
Kidneys each	180 grams	Congestion
Spleen	240 grams	
Brain	1500 grams	

Toxicology Test Results:

Blood positive for:

Cocaine	628ng/mL
Benzoylecgonine	7468ng/mL

Urine positive for Benzoylecgonine

Circumstances of death were reported in police reports including body camera at the scene of death.

Final Summary

This man was under the influence of cocaine and its metabolite. The metabolite present in much larger quantity is consistent with an ongoing use of the cocaine which was being metabolized by his body prior to the event. The cocaine is a stimulant drug and its effects are not sufficient to explain the death. He had scalp and facial abrasions consistent with his face down position in the garage prior to his death. The depth of the restraint abrasions of his wrists are consistent with the handcuffing during the struggle and prior to his death. The initial autopsy detailed the presence of the blunt force injuries including abrasions and contusions. During the confrontation the deceased repeatedly asked for a drink. No aspiration of gastric contents was detected. The stomach did contain clear liquid. No obstruction of the airway by foreign material was detected.

He had an enlarged heart which mostly involved the left ventricle. Neither postmortem exam detected any significant coronary artery disease or inflammation or scarring of the muscle. Both exams revealed congestion of the lungs and spleen. The liver had significant steatosis (fatty changes) but no significant inflammation.

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This man's death still is consistent with an asphyxia event ("suffocation"). There is a contribution of the influence of the stimulant drug presence, but the death is not due to the drug. If the stimulant drug was a dominant factor there should have been some evidence of signs of respiratory distress prior to the encounter. The reports indicate the man was mobile and active prior to the terminal event. His death is most consistent with asphyxia due to compromised airway which is best explained by a facedown position restricting his breathing. While there were only small abrasions of his left back and flank he was in a facedown position with his wrists cuffed and this would potentially further compromise his breathing.

Amendment Final
July 17, 2020