



DEATH INVESTIGATION SUMMARY

Case Number: 2018-07403

GOMEZ ALONZO, FELIPE

County Pronounced: Otero
Law Enforcement: United States Border Patrol
Agent: Noel Palacios
Date of Birth: 5/19/2010
Pronounced Date/Time: 12/24/2018 11:48:00 PM
Central Office Investigator: Bailey Johnson
Deputy Field Investigator: Sparks, Melody

CAUSE OF DEATH

Complications of influenza B infection with Staphylococcus aureus superinfection and sepsis

MANNER OF DEATH

Natural

Lori Proe DO

Medical Investigator, Assistant Professor of Pathology

All signatures authenticated electronically

Date: 3/25/2019 12:14:34 PM

DECLARATION

The death of GOMEZ ALONZO, FELIPE was investigated by the Office of the Medical Investigator under the statutory authority of the Office of the Medical Investigator.

I, Lori Proe DO, a board certified anatomic, clinical and forensic licensed to practice pathology in the State of New Mexico, do declare that I personally performed or supervised the tasks described within this Death Investigation Summary document. It is only after careful consideration of all data available to me at the time that this report was finalized that I attest to the diagnoses and opinions stated herein.

Numerous photographs were obtained along the course of the examination. I have personally reviewed those photographs and attest that they are representative of findings reported in this document.

This document is divided into 10 sections with a final Procedural Notes section:

1. Summary and Opinion
2. External Examination
3. Medical Intervention
4. Postmortem Changes
5. Evidence of Injuries
6. Internal Examination
7. Neuropathology
8. Microscopy
9. Ancillary Lab Studies
10. Postmortem Computed Tomography

Should you have questions after review of this material, please feel free to contact me at the Office of the Medical Investigator (Albuquerque, New Mexico) - 505-272-3053.

Medical Investigator

Lori Proe DO

Medical Investigator Trainee

SUMMARY AND OPINION

PATHOLOGIC DIAGNOSIS

- I. Influenza B infection with Staphylococcus aureus superinfection and sepsis
 - A. Clinical history of sore throat, nasal congestion, cough and subjective fever
 1. Positive test for influenza B, December 24, 2018
 - B. Clinical history of abdominal pain, vomiting blood and becoming unresponsive
 - C. Pulmonary hemorrhage and edema by gross examination
 1. Combined lung weight = 635 grams (expected combined lung weight = 290 grams)
 2. Sanguineous right pleural effusion = 100 mL
 3. Sanguineous left pleural effusion = 200 mL
 - D. Laryngotracheobronchitis, bronchopneumonia and interstitial pneumonitis by histology
 1. Marked intra-alveolar hemorrhage, edema and occasional hyaline membranes by histology
 2. Extensive bacterial colonies by histology
 - E. Bacterial blood and lung cultures positive for Staphylococcus aureus
 1. Immunohistochemical evidence of Staphylococcus aureus per Centers for Disease Control and Prevention testing
 2. Molecular identification of methicillin-sensitive Staphylococcus aureus per Centers for Disease Control and Prevention testing
 - F. Nasopharyngeal, right and left lung viral reverse transcriptase polymerase chain reaction testing positive for influenza B Victoria
 1. Molecular evidence of influenza B virus per Centers for Disease Control and Prevention testing

SUMMARY AND OPINION

This 8-year-old boy, Felipe Gomez Alonzo, died of complications of an influenza B infection with a Staphylococcus aureus superinfection and sepsis.

According to a review of the available medical records and a report from the New Mexico Office of the Medical Investigator Field Deputy Medical Investigator, Felipe and his father were in the custody of United States Customs and Border Protection (CBP) on the morning of December 24, 2018. Felipe complained of a sore throat, nasal congestion, cough and a subjective fever and was taken to a local hospital for evaluation. At the hospital, testing for a Streptococcal infection of the throat (rapid Group A Strep test) was performed and was negative. Testing for influenza B was positive. Felipe was prescribed ibuprofen (pain reliever and fever reducer) and was released back into the custody of CBP that afternoon. Later that evening, Felipe's father requested that Felipe be taken back to the hospital. Felipe reportedly complained of abdominal pain, vomited blood and became unresponsive on the way to the hospital. Resuscitative attempts were performed upon arrival to the hospital but were unsuccessful.

Felipe is not known to have had any history of significant medical problems.

Review of the postmortem computed tomography (CT) scan revealed a possible cyst within the skull, next to the brain.

Autopsy examination revealed a boy with no injuries other than a small scrape of the left hand.

Internally, there were collections of bloody fluid in the chest cavities. The lungs were very heavy and appeared bloody. There were no internal injuries or other signs of natural disease.

Examination of tissues from the upper airways with a microscope revealed inflammation and damage of the linings of the airways. Examination of the lungs with a microscope revealed inflammation and damage of the large and small airways and of the small air sacs (alveoli). There was a large amount of bleeding within the alveoli. Multiple bacteria were also visible by microscopic examination of the upper airways and lungs.

Examination of the brain by a specialist (neuropathologist), showed tissue overlying part of the brain that was consistent with the cyst seen on the CT scan. There were no other significant abnormalities of the brain.

Laboratory testing of the blood and of swabs of the lungs detected *Staphylococcus aureus*, a type of bacteria. Laboratory testing of the fluid within the spinal canal (cerebrospinal fluid) detected no bacteria. Laboratory testing of the nasal area and of the lungs detected influenza B, a type of virus.

Samples of tissue from this case were sent to the Centers for Disease Control and Prevention in Atlanta, Georgia for additional testing, which also detected influenza B virus and *Staphylococcus aureus* bacteria in the airways and lungs.

Toxicology testing of the blood detected diphenhydramine, an antihistamine drug sold as Benadryl at a level that would be consistent with therapeutic dosing. No other drugs or alcohol were detected.

Influenza viruses typically cause respiratory infections with signs and symptoms including fever, headache, muscle pain, fatigue, cough, sore throat and nasal discharge. In some cases, influenza infections may cause milder symptoms similar to those of the common cold. Influenza infections are often treated with supportive measures such as rest, increased fluid intake and drugs to control symptoms. If a diagnosis of influenza is made early in the course of the illness, antiviral drugs can shorten the duration of symptoms and may decrease the likelihood of complications.

One complication of influenza infection is pneumonia. Pneumonia causes the airspaces of the lungs to fill with inflammatory cells and fluid, making breathing difficult. The influenza virus damages the lung and respiratory tract tissues and can cause bleeding and fluid accumulation within the lungs. Damage from the influenza virus infection can increase the chances of bacteria causing a secondary infection of the lungs

It appears that Felipe was infected with the influenza B virus, which damaged the lungs and led to bleeding and fluid collections in and around the lungs, which impaired his breathing. The influenza B infection damaged the lung tissue and allowed *Staphylococcus aureus* to grow in and infect the lungs. The bacterium also entered the blood stream causing sepsis, a severe medical condition. The presence of bacteria in the blood stream can cause changes of the body that lead to decreased blood supply to body organs. Sepsis is associated with a high mortality rate, even with appropriate medical treatment.

The manner of death is natural.

Medical Investigator

Lori Proe DO

Medical Investigator Trainee

External exam date time: 12/26/2018 10:20:00 AM
 Authority for examination: OMI
 ID confirmed at time of exam: Yes
 Means used to confirm identity: Visual
 Other verification means:
 Location of orange bracelet: Left wrist
 Name on orange bracelet: Decedent name
 Other name on orange bracelet:
 Location of green bracelet: Left wrist
 Name on green bracelet: Decedent name
 Other name on green bracelet:
 Hospital ID tags or bracelets? No
 If yes specify stated name and location:
 Body length (cm): 113.00
 Body weight (kgs): 22.00
 BMI: 17.23

Development: Well-developed
 Development comments:
 Stature: Well-nourished
 Age: Appears to be stated age
 Anasarca: No
 Edema localized: No
 Dehydration: No
 Scalp hair color: Brown
 Scalp hair length: Short
 Eyes: Both eyes present
 Irides: Brown
 Eyes corneae: Translucent
 Eyes sclerae: White
 Eyes conjunctivae: Translucent
 Eyes petechiae: No
 Palpebral petechiae: No
 Bulbar petechiae: No
 Facial petechiae: No
 Oral mucosal petechiae: No
 Nose: Normally formed

Ears:	Normally formed
Lips:	Normally formed
Facial hair:	None
Facial hair color:	Does not apply
Maxillary dentition:	Natural
Mandibular dentition:	Natural
Condition of dentition:	Poor
Dentition comments:	
There is dental caries and the left lateral maxillary incisor is loose.	
Neck:	Unremarkable
Trachea midline:	Yes
Chest development:	Normal
Chest symmetrical:	Yes
Chest diameter:	Appropriate
Abdomen:	Flat
Anus:	Unremarkable
Back:	Unremarkable
Spine:	Normal
External genitalia:	Male
Breast development:	None
Breast masses:	None
Right hand digits complete:	Yes
Left hand digits complete:	Yes
Right foot digits complete:	Yes
Left foot digits complete:	Yes
Extremities:	Well-developed and symmetrical
Muscle group atrophy:	No
Senile purpura:	No
Pitting edema:	No
Muscle other:	No

Tattoo(s)

Tattoos present:	No
------------------	----

Cosmetic Piercing(s)

Cosmetic piercing present:	No
----------------------------	----

Scar(s)

Scar(s) present:	Yes
Scar anterior chest:	Yes
Scar right knee:	Yes

Reporting Tracking

reported by:

Verified by: Lori Proe DO on 12/26/2018 5:41:47 PM

Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Lori Proe DO

Medical Investigator Trainee

Evidence of medical intervention: Yes

Indwelling Tubes

If nasogastric tube present, specify course and position: No

If endotracheal tube present, specify course and position: Yes

Endotracheal tube: Passes through the mouth and toward the oropharynx

Endotracheal tube comment:

Tracheostomy site/tube: No

Mediastinal tube(s): No

Chest tube(s): No

If Foley catheter present, specify course and position: No

Medical intervention other:

A cervical spinal stabilization collar is around the neck. A nasal trumpet is in the right nostril.

Electrocardiogram (ECG) Monitoring Pads

ECG Monitoring Pads Present?: Yes

ECG Chest Pads: Yes

ECG abdomen pads: Yes

Other pads comments:

Defibrillator Pads

Defibrillator pads present?: Yes

Back: Yes

Other: Yes

Other pads comments:

A defibrillator pad is in the midline chest.

Vascular Catheter(s):

Vascular catheter(s): Yes

Intraosseous - proximal left shin: Yes

Vascular catheter(s) comments:

A needle puncture mark is in the left antecubital fossa.

Recent Surgical Intervention

Evidence of recent surgical intervention: No

Report Tracking

Reported by:

Verified by: Lori Proe DO on 3/21/2019 6:43:12 PM

Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Lori Proe DO

Medical Investigator Trainee

External exam date: 10/26/2018 10:20:00 AM
Body temperature: Cool subsequent to refrigeration
Rigor mortis: Fully fixed
Livor mortis - color: Purple
Livor mortis - fixation (if applicable): Fully Fixed
Livor mortis - position (if applicable): Posterior
State of preservation: Mild putrefactive decomposition
Other external features of putrefactive decomposition: There is green discoloration of the abdominal skin.

Report Tracking

Reported by:
Verified by: Lori Proe DO on 12/26/2018 6:05:03 PM
Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Medical Investigator Trainee

Lori Proe DO

Are there any injuries: Yes

Evidence of Injury:

Autopsy date: 12/25/2018 10:20:00 AM

#	Injury	Location	Injury Description
1	Blunt injury	Extremity	There is a small, healing, red-brown, linear abrasion of the posterior left hand.

Report Tracking

Reported by:

Verified by: Lori Proe DO on 12/26/2018 5:41:53 PM

Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Lori Proe DO

Medical Investigator Trainee

Date of Autopsy: 12/25/2018 10:20:00 AM

Date of Internal Exam: 12/26/2018 10:20:00 AM

BODY CAVITIES

Chest cavities examined: Yes
 See evidence of injury section: No
 Organs in normal anatomic position: Yes
 Other organ position comments:
 Diaphragm: Intact
 Serosal surfaces: Smooth and glistening
 Body cavity adhesions present: No
 Fluid accumulation present: Yes
 Fluid accumulation right chest cavity: Yes
 Fluid accumulation left chest cavity: Yes
 Fluid accumulation pericardial sac: No
 Fluid accumulation abdominal cavity: No
 Fluid accumulation pelvis: No

Fluid accumulation comments:

There are 100 mL of bloody fluid in the right pleural cavity and 200 mL of bloody fluid in the left pleural cavity.

HEAD

Brain examined: Yes
 See separate forensic neuropathology consultation report: Yes
 See evidence of injury section: No
 See evidence of medical Intervention section: No
 See postmortem changes section: No
 Brain fresh (g): 1375
 Brain fixed (g): 1375
 Facial skeleton: No palpable fractures
 Calvarium: No fractures
 Skull base: No fractures
 Skull comments:

Spinal Cord

Spinal cord examined: No

Middle Ears

Middle ears examined: No

Neck

Neck examined:	Yes
See Evidence of Injury section:	No
See Evidence of Medical Intervention section:	No
See Postmortem Changes section:	No
Subcutaneous soft tissues:	Unremarkable
Strap muscles:	Unremarkable
Jugular veins:	Unremarkable
Carotid arteries:	Unremarkable
Tongue:	Unremarkable
Epiglottis:	Unremarkable
Hyoid bone:	Unremarkable
Larynx:	Unremarkable
Palatine tonsils:	Not examined
Other neck comments:	The epiglottal, laryngeal and tracheal mucosae are erythematous.

CARDIOVASCULAR SYSTEM

Heart examined:	Yes
See separate Cardiovascular Pathology report:	No
See Evidence of Injury section:	No
See Evidence of Medical Intervention section:	No
See Postmortem Changes section:	No

Heart

Right coronary ostium position:	Normal
Left coronary ostium position:	Normal
Supply of the posterior myocardium:	Right coronary artery
Heart fresh (g):	105.0
Heart fixed (g):	

Coronary artery stenosis by atherosclerosis (in percent):

Right coronary ostium:	0
Proximal third right coronary artery:	0
Middle third right coronary artery:	0
Distal third right coronary artery:	0
Left coronary ostium:	0
Left main coronary artery:	0
Proximal third left anterior descending coronary artery:	0
Middle third left anterior descending coronary artery:	0
Distal third left anterior descending coronary artery:	0
	0

Proximal third left circumflex coronary artery:

Middle third left circumflex coronary artery: 0

Distal third left circumflex coronary artery: 0

Cardiac Chambers and Valves:

Cardiac chambers: Unremarkable

Tricuspid valve: Unremarkable

Pulmonic valve: Unremarkable

Mitral valve: Unremarkable

Aortic valve: Unremarkable

Right ventricular myocardium: No fibrosis, erythema, pathologic infiltration of adipose tissue or areas of accentuated softening or induration

Left ventricular myocardium: No fibrosis, erythema, or areas of accentuated softening or induration

Atrial septum: Unremarkable

Ventricular septum: Unremarkable

Aorta

Aorta examined: Yes

Orifices of the major vascular branches: Patent

Coarctation: No

Vascular dissection: No

Aneurysm formation: No

Complex atherosclerosis: No

Other aortic pathology: No

Vena Cava

Great vessels examined: Yes

Vena cava and major tributaries: Patent

RESPIRATORY SYSTEM

Lungs examined: Yes

See separate Cardiovascular Pathology report: No

See Evidence of Injury section: No

See Evidence of Medical Intervention section: No

See Postmortem Changes section: No

Lung right (g): 320

Lung left (g): 315

Upper and lower airways: Unobstructed, and the mucosal surfaces are smooth and yellow-tan

Pulmonary parenchyma color: Dark red-purple

Pulmonary parenchyma congestion and edema: Marked amounts of blood and frothy fluid

Pulmonary trunk: Free of saddle embolus

Pulmonary artery thrombi: None

Pulmonary artery atherosclerosis: None

Other airway and lung comments:

There is a geographic pattern of hemorrhage of the upper lung lobes and extensive hemorrhage of the lower lung lobes. The lungs are firm but not obviously consolidated.

HEPATOBIILIARY SYSTEM

Liver examined: Yes

See Evidence of Injury section: No

See Evidence of Medical Intervention section: No

See Postmortem Changes section: No

Liver (g): 775

Bile vol (mL):

Gallstones autopsy: No

Gallstones autopsy desc:

Hepatic parenchyma (color): Red-brown

Hepatic parenchyma (texture): Unremarkable

Hepatic vasculature: Unremarkable and free of thrombus

Gallbladder: Unremarkable

Gallstones: None

Intrahepatic biliary tree: Unremarkable

Extrahepatic biliary tree: Unremarkable

GASTROINTESTINAL SYSTEM

Alimentary tract examined: Yes

See Evidence of Injury section: No

See Evidence of Medical Intervention section: No

See Postmortem Changes section: No

Stomach contents vol (mL): 30

Stomach contents description:

Thin, brown-black fluid

Appendix found: No

Esophagus

Course: Normal course without fistulae

Mucosa: Gray-white, smooth and without lesions

Stomach

Mucosa: Usual rugal folds

Pylorus: Patent and without muscular hypertrophy

Small Intestine

Luminal contents: Partially digested food

Mucosa: Unremarkable

Caliber and continuity: Appropriate caliber without interruption of luminal continuity

Other small intestine comments:

The small intestine contains partially digested food and brown-black fluid.

Colon

Luminal contents: Formed stool
Mucosa: Unremarkable
Caliber and continuity: Appropriate caliber without interruption of luminal continuity

Other colon comments:

The colon contains formed, light brown stool.

Pancreas

Form: Normal tan, lobulated appearance

GENITOURINARY SYSTEM

Genitourinary system examined: Yes
See Evidence of Injury section: No
See Evidence of Medical Intervention section: No
See Postmortem Changes section: No

Kidneys

Kidneys capsules: Thin, semitransparent
Cortical surfaces: Smooth
Cortices: Normal thickness and well-delineated from the medullary pyramids
Calyces, pelves and ureters: Non-dilated and free of stones and masses
Kidney right (g): 60
Kidney left (g): 50
Urine volume (mL): 15
Urine description:
 Yellow

Urinary Bladder

Urinary bladder mucosa: Gray-tan and smooth

Male

Male: Yes

Testicles

Location: Bilaterally intrascrotal
Size: Unremarkable
Consistency: Homogeneous
Other testicle comments:

Prostate Gland

Size: Infantile
Consistency: Homogeneous
Other prostate gland comments:

RETICULOENDOTHELIAL SYSTEM

Reticuloendothelial system examined: Yes
See Evidence of Injury section: No
 No

See Evidence of Medical Intervention section:

See Postmortem Changes section: No

Spleen

Spleen (g): 65
 Spleen parenchyma: Moderately firm
 Spleen capsule: Intact
 Spleen white pulp: Prominent

Bone Marrow

Color: Red-brown, homogeneous and ample

Lymph Nodes

Regional adenopathy: No adenopathy

Other lymph node comments:

The mesenteric lymph nodes are prominent.

Thymus

Thymus (g): 25
 Parenchyma: Absent (involution by adipose tissue)

ENDOCRINE SYSTEM

Endocrine system examined: Yes
 See Evidence of Injury section: No
 See Evidence of Medical Intervention section: No
 See Postmortem Changes section: No

Pituitary Gland

Size: Normal

Thyroid Gland

Position: Normal
 Size: Normal
 Parenchyma: Homogeneous

Adrenal Glands

Adrenal right (g):
 Adrenal left (g):
 Size: Normal
 Parenchyma: Yellow cortices and gray medullae with the expected corticomedullary ratio

MUSCULOSKELETAL SYSTEM

Musculoskeletal system examined: Yes
 See Evidence of Injury section: No
 See Evidence of Medical Intervention section: No
 See Postmortem Changes section: No
 Bony framework: Unremarkable
 Musculature: Unremarkable
 Subcutaneous soft tissues: Unremarkable

Other musculoskeletal system Unroofing of the middle ears reveals no purulent material.
comments:

ADDITIONAL COMMENTS

Expected visceral weights are for male children of 8 years of age and are taken from "Average Organ Weights (grams) and Measurements of Children", adapted from Coppoleta and Wolbach as modified by Dr. Gerald S. Spear.

Brain: 1375 grams, expected weight = 1273 grams
Heart: 105 grams, expected weight = 110 grams
Liver: 775 grams, expected weight = 736 grams
Spleen: 65 grams, expected weight = 69 grams

Other organ weight measurements:

Lung weights:

Right lung: 320 grams

Left lung: 315 grams

Combined lung weight = 635 grams (expected combined lung weight = 290 grams)

Kidney weights:

Right kidney: 60 grams

Left kidney: 50 grams

Combined kidney weight = 110 grams (expected combined kidney weight = 149 grams)

Report Tracking

Reported by:

Verified by: Lori Proe DO on 3/25/2019 12:13:50 PM

Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Lori Proe DO

Medical Investigator Trainee

Summary:**NEUROPATHOLOGIC FINDINGS:**

- I. Normal brain with scattered mild to moderate hypoxic-ischemic changes.
- II. Focal aggregate of leptomeninges, right inferior frontal lobe (consistent with arachnoid cyst seen by postmortem imaging)

SUMMARY AND EXPLANATION OF FINDINGS:

Gross and microscopic examination of the brain demonstrates an appropriately developed brain with no histopathologic abnormality.

An aggregate of arachnoid mater, located on the inferior aspect of the right frontal lobe, may be consistent with the arachnoid cyst depicted on postmortem computed tomography. Arachnoid cysts may produce symptoms depending on their location and their size, including headache, nausea and vomiting, but may also be asymptomatic.

Brain exam date:	1/9/2019 12:00:00 AM
Brain:	Yes
Dura:	Yes
Other materials available for exam:	Pituitary gland
Brain Dissection Method:	Cerebrum - coronal
Brain fresh:	1375.00
Brain fresh:	
Brain fixed:	1375.00

Evidence of Injury**General Description (External):**

Dura mater:	Smooth and without masses
Dural venous sinuses:	Patent
Cortical bridging vein:	Disrupted upon brain removal
Other cortical bridging vein comment(s):	Disrupted upon brain removal
Leptomeninges:	Other
Other comment(s) about the leptomeninges:	Possible gliotic leptomeninges on the inferior aspect of the right frontal lobe
Superficial Cortical Vasculature:	No thromboses or vascular malformations
Gyral convolution patterns:	Within normal limits
Gyral convolutions:	Moderate widening and flattening
Uncal processes:	Not grooved or herniated
Cerebellar tonsils:	Not grooved or herniated
Basilar arterial vasculature:	Normal
Cranial nerve roots:	Normal

General Description (Internal):

Cerebral cortex:	Intact and without contusion
Gray-white matter junctions:	Distinct

Internal capsule:	No neoplasm, cyst, abscess or hemorrhage
Ventricular system:	Appropriately configured and not compressed
Deep gray nuclei:	No neoplasm, cyst, abscess or hemorrhage
Other comment(s) about the deep gray nuclei:	
Hippocampi:	No neoplasm, cyst, abscess or hemorrhage
Mamillary bodies:	No neoplasm, cyst, abscess or hemorrhage
Superior cerebellar vermis:	No neoplasm, cyst, abscess or hemorrhage
Cerebellar parenchyma:	No neoplasm, cyst, abscess or hemorrhage
Brainstem structures:	No neoplasm, cyst, abscess or hemorrhage
Proximal cervical spinal cord:	No neoplasm, cyst, abscess or hemorrhage
Substantia nigra:	Appropriate for developmental age
Locus ceruleus:	Appropriate for developmental age

Other Tissues Examined

Spinal cord:	Other
Other comment(s) about the spinal cord:	
The superior cervical spinal cord shows no abnormalities.	
Eyes:	Not examined
Cervical spine:	Not examined

Microscopic Description

Microscopic examination of the isocortex (frontal, temporal, and occipital lobes) demonstrates appropriately laminated cortical ribbon, populated by morphologically normal appearing neurons that are appropriately aligned, along with normal appearing supporting glia. The subcortical white matter demonstrates normal appearing myelin density and supporting glia. The leptomeninges overlying the inferior right frontal lobe demonstrate a focal increase in leptomeninges that could be consistent with the arachnoid cyst present on postmortem CT. Otherwise, the leptomeninges are unremarkable.

The deep gray nuclei (basal ganglia and thalamus) demonstrate normal appearing nuclei (thalamus, putamen, globus pallidus, caudate, claustrum) and white matter tracts (extreme capsule, external capsule, anterior commissure, internal capsule).

The left hippocampus is architecturally normal, with normal appearing dentate gyrus, CA4-CA1 (minimal acute hypoxic-ischemic changes present), entorhinal cortex, subiculum and parahippocampal gyrus. The lateral geniculate nucleus is normal.

The cingulate gyri section demonstrates normal cortex, as well as normal appearing corpus callosum and indusium griseum.

The periventricular white matter is normal.

The pons shows normal appearing pontine nuclei, corticobulbar/corticospinal tracts and transverse pontocerebellar tracts.

The cerebellum shows moderate acute hypoxic-ischemic changes involving the dentate nucleus, with normal appearing cortex.

The cervicomedullary junction shows mild to moderate hypoxic-ischemic changes involving the olivary nuclei, with normal appearing ascending and descending tracts.

Sections of dura mater demonstrate acute intradural hemorrhage.

The anterior pituitary gland shows normal cytoarchitecture. The posterior pituitary is composed of normal appearing neuropil.

*Unless otherwise indicated sections are stained only with hematoxylin and eosin (H&E).

Cassette Code	Tissue Location	Stain
B1	Frontal lobe	
B2	Corpus callosum (rostrum/genu)	
B3	Basal ganglia, left	
B4	Thalamus	
B5	Hippocampus	
B6	Occipital lobe	
B7	Periventricular white matter	
B8	Pons	
B9	Cerebellum	
B10	Cervicomedullary junction	
B11	Dura mater	
B12	Frontal lobe	
B13	Temporal lobe	

Report Tracking

Verified by: Heather Jarrell MD on 3/21/2019 1:06:23 PM
Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Lori Proe DO

Medical Investigator Trainee

Microscopic description:

HEART: Myocytolysis, most prominent in the subendocardium and papillary muscles

EPIGLOTTIS: Denuded epithelium; subepithelial, predominantly chronic inflammation and massive subepithelial, lymphoid aggregates (within one of which is foreign material with associated giant cells)

TRACHEA: Denuded epithelium with patchy, predominantly chronic subepithelial inflammation, bacterial colonies, edema and necrotic debris; submucosal, extravasated erythrocytes

LARYNX: Denuded epithelium with patchy, chronic subepithelial inflammation, bacterial colonies, edema and necrotic debris

LUNGS: Massive intra-alveolar hemorrhage of the lower lung lobes (bilateral); lesser amount of intra-alveolar hemorrhage and edema in the upper lobes; many coccal bacterial colonies without a significant associated acute inflammatory response; prominent, predominantly lymphocytic inflammation within the alveoli, in the interstitium and in the peribronchial tissue; necrotic debris in the subepithelium of the bronchioles; hyaline membranes of some alveoli

LIVER: No significant histopathologic diagnosis

KIDNEYS: No significant, histopathologic diagnosis

GASTROESOPHAGEAL JUNCTION: Patchy areas of predominantly lymphocytic inflammation of the gastric subepithelium and muscularis mucosa; transmural, distended gastric vessels

GASTRODUODENAL JUNCTION: Slightly prominent intraepithelial eosinophils

*Unless otherwise indicated sections are stained only with hematoxylin and eosin (H&E).

Block	Tissue Location	Description	Stain
A1	Heart	Right ventricle, left ventricle, apex	
A2	Left lung		
A3	Right lung		
A4	Liver, kidneys, epiglottis		
A5	Trachea, gastroesophageal and gastroduodenal junctions		
A6	Larynx		

Report Tracking

Reported by:

Verified by:

Lori Proe DO on 3/21/2019 4:33:35 PM

Reviewed and approved by:

Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Medical Investigator Trainee

Lori Proe DO

Autopsy date: 12/25/2018 10:20:00 AM

Study type(s): Vitreous screen
Microbiological testing

Results of ancillary studies:

VITREOUS SCREEN

Analysis of the vitreous fluid reveals:

- Sodium: 128 mmol/L (reference range = 135-150 mmol/L)
- Potassium: >15 mmol/L (reference range = <15 mmol/L)
- Chloride: 113 mmol/L (reference range = 105-135 mmol/L)
- Urea nitrogen: 23 mg/dL (reference range = 8-20 mg/dL)
- Creatinine: <0.4 mg/dL (reference range = 0.6-1.3 mg/dL)
- Glucose: 55 mg/dL (reference range = <200 mg/dL)

MICROBIOLOGY

Bacterial

- Heart blood: Staphylococcus aureus
- Right lung: Many Staphylococcus aureus
- Left lung: Many Staphylococcus aureus
- Cerebrospinal fluid: No growth

Viral

- Nasopharynx: No virus isolated; Influenza B Victoria detected by reverse transcriptase polymerase chain reaction
- Right lung: No virus isolated; Influenza B Victoria detected by reverse transcriptase polymerase chain reaction
- Left lung: No virus isolated; Influenza B Victoria detected by reverse transcriptase polymerase chain reaction

Report Tracking

Reported by:

Verified by: Lori Proe DO on 3/21/2019 5:54:45 PM

Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Medical Investigator

Lori Proe DO

Date of examination: 12/25/2018 10:20:00 AM

Study date:

Accession number:

Exam type: Computed tomography

Technique: Whole body post-mortem

Comparison: None

Comments:

The postmortem computed tomography scan is interpreted by Gary Mlady, MD, Radiologist:

2018-07403
Felipe Gomez-Alonzo
DOB 5/19/2010

Whole body post-mortem CT

Findings:

Head and neck: No acute intracranial abnormality. No intracranial hemorrhage or mass effect. Incidental note of arachnoid cyst in middle cranial fossa. No skull fracture. Normal cervical spine. Soft tissues of the neck are normal. Nasal tube and Endotracheal tube are present.

Chest: Diffuse pulmonary opacities, greater centrally and at the lung bases but also seen peripherally. Moderate right and small left pleural effusions.

Abdomen and Pelvis: No abnormalities seen.

Bones: No fractures. Intraosseous IV in the left tibia.

Soft tissues: Normal.

Impression:

Diffuse pulmonary opacities with pleural effusions. This may be due to pneumonia, aspiration, and/or pulmonary hemorrhage with superimposed atelectasis.

Interpreting radiologist: Gary Mlady MD
12/27/18 at 0730 hours

Report Tracking

Reported by:

Verified by: Lori Proe DO on 3/15/2019 3:33:54 PM

Reviewed and approved by: Lori Proe DO on 3/25/2019 12:14:34 PM

Case Number: 2018-07403
 Decedent Name: GOMEZ ALONZO, FELIPE
 Pathologist: Lori Proe DO
 Fellow/Resident:
 Date of Examination: 12/25/2018 10:20:00 AM

Morphology technican(s) present

Yellow Sheet	Morphology Technician
Identification	Edward Saiz
Autopsy	Edward Saiz
Evidence	Michelle Willcutt
LabOther	Edward Saiz
Attendees	Edward Saiz
Evidence	Edward Saiz
Radiology	Edward Saiz
Retention	Lori Proe DO

Morphology technican supervisor(s) present

Yellow Sheet	Morphology Technician Lead
Identification	Michelle Willcutt
Autopsy	Cassandra Toledo
Evidence	Michelle Willcutt
Radiology	Michelle Willcutt
Retention	Lori Proe DO
LabOther	Lori Proe DO
Attendees	Lori Proe DO

Autopsy attendees

Other morphology technicians present:

Valerie Villanueva Staff Tech

Specimens obtained for laboratory testing

HIV serology:	No
HIV spin and store:	Yes
HCV/HBV serology :	No
Influenza serology:	No
Other serology:	No
Freezer protocol:	No
DNA card:	Yes
Metabolic screen:	No
Cytogenetics:	No
Med-X protocol:	No
Urine dipstick:	No
Blood cultures (bacterial):	Yes
Lung cultures (bacterial):	Yes
CSF culture (bacterial):	Yes
Spleen culture (bacterial):	No
Stool culture (bacterial):	No
Other bacterial culture (specify):	
Mycobacterial culture (lung):	No
Mycobacterial culture (other):	No
Viral Cultures:	Yes

Approach to autopsy dissection

Rokitansky evisceration:	No
Virchow evisceration:	Yes
Modified evisceration:	No

Special autopsy techniques

HIV serology:	No
Pericranial membrane removal:	No
Neck anterior dissection:	No
Neck posterior dissection:	No
Facial dissection:	No
Vertebral artery dissection (in situ):	No
Cervical spine removal:	No
Layered anterior trunk dissection:	No
Anterolateral rib arc dissection:	No
Back dissection:	No
Posterior rib arc dissection:	No
Extremity soft tissue dissection:	No
Eye enucleation:	No
Inner middle ear evaluation:	Yes
Maxilla or mandible resection:	No
Spinal cord removal (anterior):	No
Spinal cord removal (posterior):	No
Other dissection(s):	

Tissues retention

Stock jar with standard tissue retention:	Yes
Rib segment:	Yes
Pituitary gland:	Yes
Breast tissue (women only):	No
Brain retention:	Yes
Spinal cord retention:	No
Cervical spine retention:	No
Heart retention:	No
Heart-lung block retention:	No
Rib cage retention:	No
Long bone retention:	No
Other retention,specify:	

Disposition of tissues retained for extended examination

Specimen outcome: Not applicable; no tissues were retained for extended examination.

Number of scene photos produced by the OMI

Scene Photos: 53

Number of autopsy photos produced by the OMI

Autopsy Photos: 119

Evidence collected

FBI blood tube: No
 Blood spot card: No
 APD blood card: No
 Thumbprint: Yes
 Fingerprints: No
 Palmprints: No
 Print hold: No
 Oral swab: No
 Vaginal swab: No
 Anal swab: No
 Other swab: No
 Fingernails: No
 Scalp hair: No
 Pubic hair: No
 Pubic hair combing: No
 Projectile(s): No
 Retain clothing: No
 Retain valuables: No
 Retain trace evidence: No
 Retain body bag: No
 Retain hand bags: No
 Ligature: No
 Other evidence retained:

Personal effects

Property Type	Property Description	Property Detail
None	Other	No Clothing Items to Inventory
None	Other	No Personal Effects Items to Inventory

Clothing

Property Type	Property Description	Property Detail
---------------	----------------------	-----------------