

HILLSBOROUGH COUNTY, FLORIDA



MEDICAL EXAMINER DEPARTMENT

11025 NORTH 46TH STREET

TAMPA, FLORIDA 33617

813-914-4500

Report of Diagnosis and Autopsy
on

Yann Arnaud

File 18-02433

OPINION

Final Diagnosis:

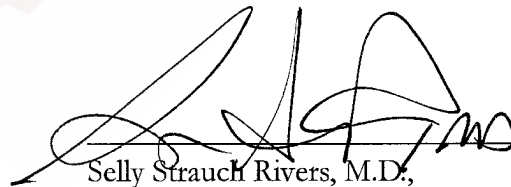
Blunt impact to head and neck
Basilar skull fractures
Cerebral contusion
Subarachnoid hemorrhages and subdural
hemorrhage
Subgaleal contusion
Blunt impact to chest and abdomen
Right rib fractures with pulmonary
contusions
Right lung laceration
Hemothoraces
hemoperitoneum

Cause of Death:

**Basilar Skull Fractures with Contusions and
Subarachnoid Hemorrhages of Brain *due to* Blunt
Impact to Head and Neck**

Manner of Death:

Accident (Circus acrobat who fell during a
performance)



Selly Strauch Rivers, M.D.,
Associate Medical Examiner

04/18/2018

Date Signed

<i>Death:</i> 18 Mar 2018 at 0333 hrs	<i>Autopsy:</i> 19 Mar 2018
Tampa General Hospital	11025 North 46 th St, Tampa
<i>Age:</i> 38 years	<i>Performed by:</i>
<i>Length and Weight:</i> 5'10", 178 pounds	Selly Strauch Rivers, M.D.

DESCRIPTION OF AUTOPSY FINDINGS

EXTERNAL EXAMINATION: 19 March 2018 at 0900 hours

The body is that of a well-developed and nourished, adult man with athletic body habitus, appearing the above-stated length and weight and compatible with the reported age.

Condition of the Body: The body is cold to touch, with fully developed rigor mortis. The livor mortis is fixed with digital pressure, red-pink, and extends over the posterior surfaces of the body, and rises to the posterior axillary lines. The body is neither decomposed, nor embalmed.

Head and Face: The scalp hair is straight, brown, and measures 1-1/2" in maximal length. The facial hair is shaved.

Eyes: The irides are brown. The pupils have equal diameters. The corneae are clouded. The conjunctivae are pale and unremarkable with no petechial hemorrhages. The sclerae are white.

Nose: The external nares are free of foreign material or abnormal secretions. The nasal skeleton is palpably intact.

Mouth: The lips have no injuries. The oral cavity has natural dentition in adequate repair. The oral mucosa has no injuries or hemorrhages, is unremarkable with intact frenula, and no petechial hemorrhages in the oral vestibule. It is lined with red-tinged mucus.

Ears: The left external auditory canal contains liquid red blood. The right external auditory canal is free of foreign material.

Neck: The neck is symmetrical and unremarkable and has no palpable masses or external injuries.

Chest: The thorax is well-developed and symmetrical. No palpable masses are in the axillary regions.

Abdomen: The abdomen is flat, firm, and has no palpable masses.

External Genitalia: The external genitalia are those of a normal adult man, with no injuries. The testes are descended into the scrotal sac and palpably unremarkable.

Lower Extremities: The lower extremities are symmetrical and have no anatomic abnormalities. The anterior surfaces of the knees and shins have scattered small irregular scars.

Upper Extremities: The arms, forearms, wrists, and hands are unremarkable. The fingernails are intact.

Back: The back is unremarkable. The anus has no abnormalities or external hemorrhoids.

Marks, Scars and Tattoos:

A tribal tattoo composed of multiple symbols is on the right hip region extending to the right femoral region.

Therapy:

Two chest tubes are placed in the lateral aspect of the right side of the chest within the 5th and 6th intercostal spaces. Two chest tubes are placed within the lateral aspect of the left side of the chest within the 6th and 7th intercostal spaces. All chest tubes are adequately placed, situated within the pleural cavity, and do not puncture the lungs.

A 23" semilunar sutured incision extends across the right mammary region, involving the right nipple, and extends just inferior to the left nipple, across the left inframammary region, consistent with a recent clamshell thoracotomy. A 4" linear vertical sutured incision is just right of the umbilicus. Intravenous access catheters are present in the right and left antecubital fossa, and the right and left femoral regions. An Intravenous access catheter is present in the dorsum of the left hand. A urinary catheter is in place and clamped off without a retention bag present. An endotracheal tube is in place and cut flush with the decedent's lips.

Postmortem Radiographic Imaging:

Postmortem radiographs of the head, neck, chest, abdomen, and pelvis are performed (anterior/posterior view).

Postmortem radiographs of the head (anterior/posterior view) reveal multiple fractures of the skull base.

Postmortem radiographs of the chest (anterior/posterior view) reveal multiple fractures of the right side of the thorax, and no fractures on the left side.

BLUNT IMPACT WOUNDS:*Head and Neck:*

1. There is bilateral purple periorbital ecchymoses.
2. The lateral aspect of the right eye has scleral hemorrhage.
3. Liquid red blood is present in the left external ear meatus.
4. An 18 x 12 centimeter subgaleal contusion involves the right frontotemporal, parietal portion of the decedent's scalp.
5. There is a non-volumetric liquid red subdural hematoma.
6. A 13 x 8 centimeter thin patchy subarachnoid hemorrhage involves the entirety of the left cerebral hemisphere. A thin 5 x 4 centimeter subarachnoid hemorrhage involves the right frontal lobe of the brain. A 7 x 6 centimeter thick red subarachnoid hemorrhage involves the right temporal parietal lobes of the brain. A thick subarachnoid hemorrhage involves the superior aspect of the entirety of the cerebellum.
7. A 3 x 2 centimeter contusion involves the inferior aspect of the right temporal lobe.
8. Numerous fractures involve the right and left anterior and mid fossa of the skull base, to include the crista galli.

Chest and Abdomen:

1. A 2" round purple contusion is on the superior anterior aspect of the right shoulder. The anterior aspects of the right ribs, 1-6, have complete transverse, minimally displaced fractures. The proximal aspect of the right clavicle has a complete transverse displaced fracture. The lateral aspects of the right ribs, 3-10, have complete transverse displaced fractures. All fractures have a minimal/moderate amount of hemorrhage.
 2. The hilum of the right lung has a 6 centimeter laceration that extends 3 centimeters in depth.
 3. The right and left lungs are globally involved with contusions comprising approximately 95% of the pulmonary parenchyma.
 4. There is a 200 milliliter liquid red left hemothorax and a 400 milliliter liquid red right hemothorax.
 5. There is a 200 milliliter liquid red hemoperitoneum.
- Having been described, the injuries will not be repeated.

INTERNAL EXAMINATION: 19 March 2018 at 0920 hours

Body Cavities: The panniculus adiposus is 0.8 centimeters. The right pleural cavity contains 400 milliliters of liquid red blood. The left pleural cavity contains 200 milliliters of liquid red blood. The abdominal cavity contains 200 milliliters of liquid red blood. The pleural cavities and the abdominal cavity contain no unusual fibrous adhesions. All body organs are present in the normal and anatomical position.

Head: The galeal aponeurosis is unremarkable except as indicated. The base of the skull have fractures as indicated. The brain weighs 1,420 grams and has symmetrical cerebral hemispheres. The external surfaces of the brain are edematous with flattening of the gyri and narrowing of the sulci. The arachnoid membrane is thin and delicate with congested arachnoid vessels. The cranial nerves are intact. The cerebral arteries have no significant atherosclerosis or other abnormalities. Cut surfaces of the cerebral hemispheres, brainstem, and cerebellum reveal no non-traumatic lesions. The cerebral ventricles are of normal caliber and shape.

Neck: The soft tissues of the neck, including the strap muscles, thyroid gland, and large vessels, reveal no abnormalities. The hyoid bone and larynx are intact and not fractured. The lingual mucosa is intact; the underlying firm red-brown musculature is devoid of hemorrhage.

Cardiovascular: The heart weighs 420 grams (expected heart weight, 328- 351 grams). The aorta and its major branches arise normally and follow the usual course, and are widely patent and free of significant atherosclerosis or other abnormalities. The vena cava and its major tributaries return to the heart in the usual distribution and are free of thrombi. The large vessels are underfilled and contain predominantly liquid red blood.

The pericardial surfaces are smooth, glistening, and unremarkable, and the pericardial sac is free of adhesions. The coronary arteries arise normally and follow the usual distribution of a right-dominant pattern and are widely patent without significant atherosclerosis or thrombi. The chambers and valves bear the usual size-position relationships and are unremarkable. The circumference of the valves is as follows: tricuspid 9.8 centimeters; pulmonic 6.2 centimeters; mitral 9.6 centimeters; aortic 6.6 centimeters. The myocardium is dark red-brown, firm, and unremarkable. The

atrial and ventricular septa are intact. The thickness of the walls of the heart is as follows: left ventricle 1.4 centimeters, interventricular septum is 1.3 centimeters, and the right ventricle is 0.2 centimeters. The epicardium is diffusely contused (consistent with recent cardiac massage). The endocardium is translucent and smooth.

Pulmonary: The right lung weighs 1,210 grams. The left lung weighs 1,120 grams. The upper airway contains a minimal amount of liquid red blood and the mucosal surfaces are smooth, yellow-tan, and unremarkable. The pleural surfaces are smooth, glistening and unremarkable, except for in regions associated with recent trauma. Lobar divisions are of the usual configuration. The pulmonary parenchyma is dark red-purple exuding marked amounts of blood and frothy fluid; no focal lesions are noted. The bronchioles have a tan-pink lumen and are lined by red-tinged fluid. The pulmonary arteries are normally developed, patent, and have no thrombus or embolus.

Liver and Biliary System: The liver weighs 2,140 grams. The hepatic capsule is smooth, glistening, and intact covering red-brown parenchyma with no focal lesions noted. The portal vein and its tributaries are unremarkable. The gallbladder contains a measured 3 milliliters of slightly mucoid, amber-colored bile. The mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without calculi.

Digestive: The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds, and the lumen contains 200 milliliters of viscous green liquid with macerated food, none of the particles are identifiable. The serosa of the large and small bowel is unremarkable. The appendix is present. The pancreas is lobulated, gray-white, and the ducts are unobstructed.

Genitourinary Tract: The right kidney weighs 160 grams. The left kidney weighs 160 grams. The renal capsules are smooth, thin, semi-transparent, and strip with ease from the underlying smooth, red-brown, firm cortical surface. The cortex is sharply delineated from the medullary pyramids which are red to purple to tan and unremarkable. The calyces, pelves, and ureters are unremarkable. The urinary bladder has gray-tan, smooth mucosa containing a measured 9 milliliters of clear urine. The relationships at the trigone are unremarkable.

The bilaterally descended testes are of normal size and consistency. The prostate is not enlarged. Cut surface of the

prostate is smooth and tan-white.

Reticuloendothelial System: The spleen weighs 130 grams. The spleen has a smooth, intact capsule covering red-purple, soft parenchyma; the lymphoid follicles are unremarkable. The regional lymph nodes appear normal. The bone marrow is red-purple and homogeneous, without focal abnormality.

Endocrine System: The pituitary, thyroid, and adrenal glands are unremarkable.

Musculoskeletal System: The bony framework, supporting musculature, and soft tissues are not unusual, except for in regions associated with recent trauma and recent medical resuscitative attempts.

SSR:kr 03/20/18

MICROSCOPIC DESCRIPTION

Heart, Left ventricle: The heart does not reveal any fatty infiltration, inflammation, fibrosis, necrosis, or myocyte disarray. Numerous extravasated red blood cells surround the myocytes creating pools of hemorrhage.

Liver: Sections of the liver do not reveal inflammatory infiltrate, fibrosis, or steatosis.

Lung: The lungs exhibit diffuse red blood cells and pneumocytes in the alveolar spaces. The bronchioles contain extravasated red blood cells admixed with sloughed respiratory cells. Anthracotic pigment is identified within the alveolar walls. Diffuse marked atelectasis is present.

Slide Key:

1. Heart, Left Ventricle, Lung, Liver

SSR: 04/18/18

— End of Autopsy Report; Toxicology Report is Appended —

Hillsborough County Medical Examiner Department Toxicology Report

Decedent's Last Name	First	Case Number	Date Autopsy
Arnaud	Yann	18-02433	19-MAR-2018

Medical Examiner Entering Cause of Death

Selly Strauch Rivers, MD, Associate Medical Examiner

Attending Medical Examiner

Selly Strauch Rivers, MD, Associate Medical Examiner

The following toxicology procedures were performed | 18-02433 A | Arnaud, Yann:

Procedure	Specimen Type	Date/Time Collected (Antemortem only)
Volatiles by Headspace GC	Serum/Plasma	03/17/2018 2335
ELISA for Drugs of Abuse	Serum/Plasma	03/17/2018 2338
Comprehensive Drug Screen by GCMS	Heart Blood	
Cannabinoids (LC/MS/MS)	Serum/Plasma	03/17/2018 2338

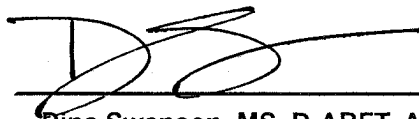
The following substances were detected and confirmed | 18-02433 A | Arnaud, Yann:

None

The following substances were identified by matching mass spectral libraries, however, no further testing was conducted | 18-02433 A | Arnaud, Yann:

Substance

Caffeine



4.13.18

Dina Swanson, MS, D-ABFT, Assistant Chief Forensic Toxicologist
13-APR-2018

The following substances are included in the laboratory's typical scope of analysis | 18-02433 A | Arnaud, Yann:

6-Acetylmorphine	Codeine	MDMA	Oxazepam
7-Aminoflunitrazepam	Cotinine	MDPV	Oxycodone
11-Carboxy-THC	Cyclobenzaprine	Meclizine	Oxymorphone
11-Hydroxy-THC	Desipramine	Meperidine	Paroxetine
Acetaminophen	Dextromethorphan	Mephedrone	Pentazocine
Acetone	Diazepam	Mepivacaine	Pentobarbital
Alprazolam	Dicyclomine	Meprobamate	Phencyclidine
Amitriptyline	Diltiazem	Methadone	Phenobarbital
Amobarbital	Diphenhydramine	Methamphetamine	Primidone
Amphetamine	Doxepin	Methanol	Procaine
Benzotropine	Doxylamine	Methedrone	Promethazine
Butabarbital	Ethanol	Methylone	Propoxyphene
Butalbital	Etomidate	Midazolam	Quetiapine
Bupropion	Fentanyl	Mirtazapine	Salicylates
Caffeine	Fluoxetine	Morphine	Secobarbital
Carisoprodol	Fluvoxamine	Norcitalopram	Sertraline
Chlordiazepoxide	Hydrocodone	Nordiazepam	Strychnine
Chlorpheniramine	Hydromorphone	Nordoxepin	Temazepam
Chlorpromazine	Imipramine	Norfluoxetine	THC
Citalopram	Isopropanol	Norketamine	Thioridazine
Clomipramine	Ketamine	Normeperidine	Tramadol
Clonazepam	Levamisole	Norpropoxyphene	Trazodone
Clonidine	Lidocaine	Nortriptyline	Triazolam
Clozapine	Lorazepam	Norvenlafaxine	Trimipramine
Cocaethylene	Loxapine	Olanzapine	Venlafaxine
Cocaine/Benzoyllecgonine	MDA	Orphenadrine	Verapamil
			Zolpidem

Key to Abbreviations | 18-02433 A | Arnaud, Yann:

CO	Co-Oximetry
ELISA	Enzyme-linked immunosorbant assay
FPIA	Fluorescence polarization immunoassay
GC	Gas chromatography
GCMS	Gas chromatography mass spectrometry
GHB	Gamma-Hydroxybutyric Acid
HPLC	High performance liquid chromatography
ICP	Inductively Coupled Plasma
LCMS	Liquid chromatography mass spectrometry
LC-MS/MS	Liquid chromatography-tandem mass spectrometry
LSD	Lysergic Acid Diethylamide
MDA	3,4-Methylenedioxyamphetamine
MDMA	3,4-Methylenedioxymethamphetamine
MDPV	3,4-Methylenedioxypropylvalerone
PCP	Phencyclidine
PdCl ₂	Palladium chloride microdiffusion
SP	Spectrophotometry
THC	Tetrahydrocannabinol