

**OFFICE OF THE MEDICAL EXAMINER  
DISTRICT NINE  
2350 E. Michigan Street  
Orlando, Florida 32806-4939**

**REPORT OF AUTOPSY**

**DECEDENT:** CHRISTOPHER POWER **CASE NUMBER:** ME 2016-00660

**MANNER OF DEATH:** Undetermined **IDENTIFIED BY:** MICHAEL AND  
ALISON POWER

**AGE:** 17 YEARS  
**RACE:** BLACK

**SEX:** MALE  
**DATE OF DEATH:** April 24, 2016

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**DATE/TIME OF AUTOPSY:** April 25, 2016 at 9:15 am

 8-17-2016  
**PERFORMED BY:** Gary Lee Utz, MD, Deputy Chief Medical Examiner

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**CAUSE OF DEATH:** Hypoxic encephalopathy, due to  
resuscitated cardiopulmonary arrest following  
administration of anesthetic agents

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**AUTOPSY FINDINGS**

- I. Resuscitated cardiopulmonary arrest:
  - A. Hypoxic encephalopathy
  - B. Early bronchopneumonia

continued...

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**TOXICOLOGY ANALYSIS:** See laboratory report.

**CONCLUSION:** In consideration of the circumstances surrounding the death, and after examination of the body, and review of the available medical records, it is my opinion that the death of Christopher Power, a 17 year old man who suffered a cardiopulmonary arrest during a dental procedure, is due to hypoxic encephalopathy following resuscitated cardiopulmonary arrest that occurred during the administration of anesthetic agents.

The deceased had been medicated with midazolam, meperidine, and nitrous oxide during a procedure involving multiple tooth extractions. An anesthesia record for the procedure could not be located. Based on conversations with the provider and reports in the medical record, it appears the decedent first exhibited respiratory compromise at the conclusion of the procedure with subsequent cardiac arrest. The deceased was resuscitated, transported to Osceola Regional Medical Center, and subsequently to Nemours Children's Hospital where he expired two days later. The autopsy was consistent with death due to hypoxic brain injury. No other abnormalities were apparent, and no other reason for the arrest could be determined.

The manner of death is undetermined.

**POSTMORTEM EXAMINATION  
OF THE BODY OF CHRISTOPHER POWERS**

A postmortem examination of the body of a black man identified as Christopher Powers is performed pursuant to Florida statute 406.11 by Gary Lee Utz, MD, Deputy Chief Medical Examiner, District Nine at the Orange County Medical Examiner facility, Orlando, Florida on April 25, 2015 at 9:15 am.

**IDENTIFICATION:** The body of Christopher Powers is identified by Micheal and Alison Power, his parents. The positive visual identification is made to RN Emily and Dr. Fagan at Nemours Children's Hospital on April 22, 2016 at 1:00 pm.

**CLOTHING AND VALUABLES:** The body is received unclothed in a diaper.

**EXTERNAL EXAMINATION**

The body is that of a well-developed, well-nourished, black man that weighs 131 pounds, measures 69 inches in length, and appears compatible with the stated age of 17 years. The body is cool to touch. Rigor mortis is fully fixed in the extremities and jaw. Diffuse blanching purple livor mortis extends over the posterior surface of the body, except in the areas exposed to pressure.

The scalp hair is dark brown, tightly curled, and measures up to 2 inches in length over the crown. The irides are brown; the corneas are clear. The sclerae and conjunctivae are pale. The nose and ears are not unusual and display no evidence of trauma. The oral cavity is free of blood and the mucosae are without evidence of trauma with the exception of several recent tooth extractions. The natural teeth are in good repair with orthodontic appliances in place. The neck is without masses, and the larynx is in the midline. The thorax is well-developed and symmetrical.

The abdomen is flat. The external genitalia are those of a normal adult man.

The anus and back are unremarkable. The upper and lower extremities are well-developed and symmetrical, without absence of digits.

**IDENTIFYING MARKS AND SCARS:** No identifying marks or scars are readily apparent.

**EVIDENCE OF MEDICAL INTERVENTION:** An adhesive bandage is present on the right neck. An endotracheal tube is present in the mouth and its tip is in the trachea. Intravascular catheters are present in the antecubital fossae bilaterally, the right groin, and the left wrist. A Foley catheter is in place.

### **EVIDENCE OF INJURY**

**Head and Neck:** None.

**Torso:** None.

**Upper and Lower Extremities:** None.

### **INTERNAL EXAMINATION**

**BODY CAVITIES:** No adhesions or abnormal collections of fluid are within any of the body cavities. All body organs are present in normal anatomical position.

**CARDIOVASCULAR SYSTEM:** The heart weighs 240 grams. The pericardial surfaces are smooth, glistening and intact; the pericardial sac contains a physiologic amount of fluid. The coronary arteries arise normally, follow the usual distribution, and are widely patent, without atherosclerosis or thrombosis. The chambers and valves exhibit the usual size-position relationships and are unremarkable; the atrial and ventricular septa are intact. The myocardium is red-brown and firm, without focal abnormalities. The aorta and its major branches arise normally, follow the usual courses, and are widely patent, without atherosclerosis. The vena cava and its tributaries return to the heart in the usual distribution and are free of thrombi.

**RESPIRATORY SYSTEM:** The right and left lungs weigh 720 grams and 660 grams, respectively. The upper airway is clear of debris and foreign material; the mucosa is slightly hyperemic and smooth. Whitish foam is present within the airway extending into the larger bronchi of both lungs. The pleural surfaces are smooth, glistening and intact. The pulmonary parenchyma is diffusely congested and edematous and exudes a large amount of blood and frothy fluid. No focal lesions are seen. The pulmonary vasculature is unremarkable.

**HEPATOBIILIARY SYSTEM:** The liver weighs 1430 grams. The hepatic capsule is smooth, glistening and intact, covering a red-brown parenchyma

without focal lesions noted. The gallbladder contains approximately 10 milliliters of dark green, slightly mucoid bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi.

**ENDOCRINE SYSTEM:** The pituitary, thyroid and adrenal glands are unremarkable. The pancreas has the usual yellow-tan, lobulated appearance and the ducts are clear.

**DIGESTIVE SYSTEM:** The esophagus is lined by a gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds and the lumen contains 110 milliliters of thin, tan liquid. The small and large intestines are unremarkable. The appendix is present.

**GENITOURINARY SYSTEM:** The right and left kidneys weigh 140 grams and 150 grams, respectively. The renal capsules are smooth, thin and semitransparent, and strip with ease from the underlying smooth, red-brown, firm, 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. The urinary bladder contains no urine. The mucosa is gray-tan and smooth.

The prostate gland and seminal vesicles are unremarkable.

**RETICULOENDOTHELIAL SYSTEM:** The spleen weighs 90 grams and has a smooth intact capsule covering a deep red-purple, moderately firm parenchyma; the lymphoid follicles are unremarkable. The regional lymph nodes appear normal. The exposed bone marrow is red-purple and homogeneous, without focal abnormalities.

**MUSCULOSKELETAL SYSTEM:** The bony framework, supporting musculature, and soft tissues are not unusual.

**NECK:** Examination of the soft tissues of the neck, including strap muscles, thyroid gland, and large vessels, reveals no abnormalities. The hyoid bone and larynx are intact.

**HEAD AND CENTRAL NERVOUS SYSTEM:** The brain weighs 1520 grams. The dura mater and falx cerebri are intact. The leptomeninges are thin, delicate, and dry. The cerebral hemispheres are symmetrical. There is marked generalized cerebral edema with flattening of the gyri, narrowing of the sulci, fullness of the cerebellar tonsils, and bilateral uncal grooving. The structures at the base of the brain, including the cranial nerves and blood vessels, are intact and free of additional abnormalities. Coronal sections through the cerebral hemispheres reveal uniform softening and loss of the normally soft, grey matter-white matter interface. No other lesions within the cortex, subcortical white matter, or deep parenchyma of either hemisphere are present. The ventricles are small in caliber. Sections through the brainstem and cerebellum reveal no additional abnormalities.

### **MICROSCOPIC EXAMINATION**

- HEART:** Fixation and sectioning artifact is prominent. Scattered myocyte nuclei appear enlarged. No significant inflammation or fibrosis is present.
- LUNGS:** The lungs are normally aerated and acutely congested. Patchy acute air space inflammation is present. No other significant intraalveolar or interstitial inflammatory infiltrates are seen.
- LIVER:** The normal lobular architecture of the liver is preserved. Central lobular congestion is present. Portal tracks are variably expanded by mononuclear inflammatory infiltrates. No significant steatosis is present.
- THYROID:** No pathologic abnormality.
- BRAIN:** There is generalized edema. No inflammation of the meninges or parenchyma is present. Widespread neuronal necrosis is present.

**Patient:** POWER, CHRISTOPHER  
**Client Patient ID:** 9-16-660  
**Physician:** UTZ, GARY

**Age:** 17 **Sex:** M  
**Account#:** VX80773  
**Client:** DIST 9 MEDICAL EXAMINER

**TOXICOLOGY**

Specimen Collected :04/25/2016

Lab Order No: 642601094

Reg Date: 04/26/16

Test Name	Result	Units	Cutoff/Reporting Limits
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**VOLATILE PANEL - VOLP**
**SPECIMEN TYPE**
**ANTEMORTEM BLOOD LABELED "POWER, CHRISTOPHER" DATED 4/23 @ 0445**

ETHANOL	NONE DETECTED	g/dL	0.010
ACETONE	NONE DETECTED	mg/dL	7.5
METHANOL	NONE DETECTED	mg/dL	15.0
ISOPROPANOL	NONE DETECTED	mg/dL	15.0

**Analysis by Gas Chromatography (GC) Headspace Injection**
**BLOOD DRUG SCREEN - BDSME**
**SPECIMEN TYPE**
**ANTEMORTEM BLOOD LABELED "POWER, CHRISTOPHER" DATED 4/22 @ 1435**

GC/MS

**Quantity Not Sufficient**

LC/MS/MS

**MIDAZOLAM, NORMEPERIDINE, CAFFEINE, CAFFEINE METABOLITE**
**BLOOD IMMUNOASSAY SCREEN**

AMPHETAMINES	NEGATIVE	mg/L	0.100
BARBITURATES	NEGATIVE	mg/L	0.100
BENZODIAZEPINES	<b>POSITIVE</b>	mg/L	0.050
BUPRENORPHINE	NEGATIVE	mg/L	0.001
CANNABINOIDS	NEGATIVE	mg/L	0.050
COCAINE METABOLITE	NEGATIVE	mg/L	0.100
FENTANYL	NEGATIVE	mg/L	0.001
OPIATES	NEGATIVE	mg/L	0.050
SALICYLATES	NEGATIVE	mg/L	50.0

**BENZODIAZEPINES PANEL - BNZP**
**SPECIMEN TYPE**
**ANTEMORTEM BLOOD LABELED "POWER, CHRISTOPHER", DATED 04/22/16 AT 1435**

CHLORDIAZEPOXIDE	NONE DETECTED	mg/L	0.025
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**Patient:** POWER, CHRISTOPHER  
**Client Patient ID:** 9-16-660  
**Physician:** UTZ, GARY

**Age:** 17 **Sex:** M  
**Account#:** VX80773  
**Client:** DIST 9 MEDICAL EXAMINER

**TOXICOLOGY**

Specimen Collected :04/25/2016

Lab Order No: 642601094

Reg Date: 04/26/16

Test Name	Result	Units	Cutoff/Reporting Limits
MIDAZOLAM	NONE DETECTED	mg/L	0.025
DIAZEPAM	NONE DETECTED	mg/L	0.025
DESALKYLFLURAZEPAM	NONE DETECTED	mg/L	0.025
NORDIAZEPAM	NONE DETECTED	mg/L	0.025
OXAZEPAM	NONE DETECTED	mg/L	0.025
TEMAZEPAM	NONE DETECTED	mg/L	0.025
LORAZEPAM	NONE DETECTED	mg/L	0.025
ALPRAZOLAM	NONE DETECTED	mg/L	0.025
ALPHA-OH-ALPRAZOLAM	NONE DETECTED	mg/L	0.025

Reporting limit is elevated due to insufficient quantity of specimen for undiluted extraction.

Reporting limit is: Chlordiazepoxide 0.100 mg/L, Midazolam 0.100 mg/L, Diazepam 0.100 mg/L, Desalkylflurazepam 0.100 mg/L, Nordiazepam 0.100 mg/L, Oxazepam 0.100 mg/L, Temazepam 0.100 mg/L, Lorazepam 0.100 mg/L, Alprazolam 0.100 mg/L, Alphahydroxyalprazolam 0.100 mg/L.

Analysis by GC/MS

**MEPERIDINE AND METABOLITE - MEPNM**
**SPECIMEN TYPE**

ANTEMORTEM BLOOD LABELED "POWER, CHRISTOPHER" DATED 4/22 @ 1435

MEPERIDINE NOT REPORTED mcg/mL 0.020

Comment: Test was canceled due analysis failed; QNS to repeat.

NORMEPERIDINE NONE DETECTED mcg/mL 0.010

Elevated reporting limit, reporting limit is 0.040 mcg/mL

Expected analgesic range:

0.1 - 0.6 mcg Meperidine/mL.

Normeperidine concentrations: Up to 0.5 mcg/mL

Specimens were intact upon receipt. Chain of custody, specimen security and integrity has been maintained. Testing has been performed as requested

Reviewed by: Julie Bell Date: 6/21/16

FINAL REPORT - THIS COMPLETES REPORTING ON THIS CASE

**TOXICOLOGY REPORT**
**POWER, CHRISTOPHER**



**Patient:** POWER, CHRISTOPHER  
**Client Patient ID:** 9-16-660  
**Physician:** UTZ, GARY

**Age:** 17 **Sex:** M  
**Account#:** VX83742  
**Client:** DIST 9 MEDICAL EXAMINER

**TOXICOLOGY**

Specimen Collected :04/25/2016 10:00

Lab Order No: 670600459

Reg Date: 07/06/16

Test Name	Result	Units	Cutoff/Reporting Limits
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BLOOD DRUG SCREEN - BDSME

SPECIMEN TYPE

PERIPHERAL BLOOD

GC/MS

NO DRUGS DETECTED

LC/MS/MS

NORMEPERIDINE, CAFFEINE METABOLITE

BLOOD IMMUNOASSAY SCREEN

SPECIMEN TYPE

PERIPHERAL BLOOD

AMPHETAMINES	NEGATIVE	mg/L	0.100
BARBITURATES	NEGATIVE	mg/L	0.100
BENZODIAZEPINES	NEGATIVE	mg/L	0.050
BUPRENORPHINE	NEGATIVE	mg/L	0.001
CANNABINOIDS	NEGATIVE	mg/L	0.050
COCAINE METABOLITE	NEGATIVE	mg/L	0.100
FENTANYL	NEGATIVE	mg/L	0.001
OPIATES	NEGATIVE	mg/L	0.050
SALICYLATES	NEGATIVE	mg/L	50.0

BENZODIAZEPINES PANEL - BNZP

SPECIMEN TYPE

PERIPHERAL BLOOD

CHLORDIAZEPOXIDE	NONE DETECTED	mg/L	0.025
MIDAZOLAM	NONE DETECTED	mg/L	0.025
DIAZEPAM	NONE DETECTED	mg/L	0.025
DESALKYLFLURAZEPAM	NONE DETECTED	mg/L	0.025
NORDIAZEPAM	NONE DETECTED	mg/L	0.025
OXAZEPAM	NONE DETECTED	mg/L	0.025
TEMAZEPAM	NONE DETECTED	mg/L	0.025

Patient: **POWER, CHRISTOPHER**  
Client Patient ID: **9-16-660**  
Physician: **UTZ, GARY**

Age: **17** Sex: **M**  
Account#: **VX83742**  
Client: **DIST 9 MEDICAL EXAMINER**

**TOXICOLOGY**

Specimen Collected :04/25/2016 10:00

Lab Order No: 670600459

Reg Date: 07/06/16

Test Name	Result	Units	Cutoff/Reporting Limits
LORAZEPAM	<0.025	mg/L	0.025
Therapeutic range: 0.050 - 0.240 mg/L			
ALPRAZOLAM	NONE DETECTED	mg/L	0.025
ALPHA-OH-ALPRAZOLAM	NONE DETECTED	mg/L	0.025

Analysis by GC/MS

MEPERIDINE AND METABOLITE - MEPNM

SPECIMEN TYPE

PERIPHERAL BLOOD

MEPERIDINE NONE DETECTED mcg/mL 0.020

Expected analgesic range:  
0.1-0.6 mcg Meperidine/mL.  
Normeperidine concentrations:  
Up to 0.5 mcg/mL.

Testing performed by NMS Labs, 3701 Welsh Rd, Willow Grove, PA 19090-2910

NORMEPERIDINE 0.022 mcg/mL 0.010

Expected analgesic range:  
0.1-0.6 mcg Meperidine/mL.  
Normeperidine concentrations:  
Up to 0.5 mcg/mL.

Testing performed by NMS Labs, 3701 Welsh Rd, Willow Grove, PA 19090-2910

Specimens were intact upon receipt. Chain of custody, specimen security and integrity has been maintained. Testing has been performed as requested

Reviewed by: *Joan Bell* Date: 7/28/16

**FINAL REPORT - THIS COMPLETES REPORTING ON THIS CASE**

TOXICOLOGY REPORT

**POWER, CHRISTOPHER**