ARMED FORCES INSTITUTE OF PATHOLOGY
Office of the Armed Forces Medical Examiner
1413 Research Blvd., Bldg. 102
Rockville, MD 20850
1-301-319-0000
(FAX 1-301-319-0635)

FINAL AUTOPSY REPORT

Name: SCUSA, Michael Patrick
SSN (b)(3), (b)(6), (b)(2)High
Date of Birth: 05 OCT 1986 (22 years)
Date of Death: 03 OCT 2009
Date of Autopsy: 06 OCT 2009, 1200 hours
Date of Report: 15 OCT 2009

Autopsy No.: ME09-0686
AFIP No.: 3143505
Rank: E4/SPC, US Army
Place of Death: Afghanistan
Place of Autopsy: Dover Port Mortuary
Dover AFB, Dover, DE

Circumstances of Death:
SPC Michael P. Scusa's position came under heavy enemy fire from multiple directions in Kamdesh, Afghanistan. SPC Scusa was serving in Afghanistan in support of Operation Enduring Freedom (OEF).

Authorization for Autopsy: Office of the Armed Forces Medical Examiner, IAW 10 USC 1471

Identification:
SPC Michael Patrick Scusa, US Army, is positively identified by fingerprints and dental comparison on 06 OCT 2009.

CAUSE OF DEATH:
Gunshot Wound to the Neck

MANNER OF DEATH:
Homicide

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POSTMORTEM EXAMINATION

The postmortem examination, ME09-0686, of SPC Michael P. Scusa is performed at the Dover Port Mortuary, Dover AFB, DE on 06 OCT 2009, starting at approximately 1200 hours. Photographs are obtained by Mr. (b)(6) and HM2 (b)(6), OAFME Photographers. Assisting in the autopsy are SSgt Terrica Johnson, AFIP, and SSgt (b)(6) and SSgt (b)(6), OAFME.

EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished Caucasian male clad in a US Army physical training uniform. A green bag that contains personal effects is submitted separately (in the transfer container, over the body bag). A silver colored ring is noted on the left ring finger, removed at intake by mortuary personnel. Clothing and personal effects are photographed and inventoried for documentation; see "Clothing and Personal Effects".

The body weighs 150 pounds, is 67" in length and appears compatible with the reported age of 22 years. The body is cold. Rigor is noted equally in the extremities. Lividity is prominent on the back. A mild greenish discoloration is noted on the neck and around the umbilicus consistent with early postmortem decomposition.

The head is normocephalic. The head hair is light brown and short. The eyelids are unremarkable. No contact lenses are present. The irides are grayish. The corneae, conjunctivae and sclerae are unremarkable. The external auditory canals, nose and oral cavity are free of foreign material. The nasal skeleton is palpably intact. The oral cavity reveals an unremarkable tongue and natural teeth. The neck reveals a gunshot entrance wound (GSW) on the right side; see "Evidence of Injury" below, and is otherwise unremarkable with no non-traumatic abnormalities or excessive mobility.

The chest and abdomen are grossly unremarkable. The left upper back reveals superficial abrasions. A GSW is noted on the left upper back; see "Evidence of Injury" below. No other significant trauma or abnormalities are noted. The external genitalia are those of a normal adult circumcised male and are unremarkable.

Minor abrasions are noted on the left elbow and posterior surface of the forearm. A superficially penetrating wound is noted on the anterior distal right thigh; see "Evidence of Injury. The extremities are otherwise unremarkable.

A tattoo is noted on the left upper back. No major surgical scars or other identifying marks are seen.

EVIDENCE OF INJURY

Perforating Gunshot Wound to the Neck:
A perforating gunshot wound (GSW) of the neck is noted with an entrance wound on the right side of the lower neck and an exit wound on the left upper back. The entrance wound is 10" from the top of the head and 2" right of the anterior midline. The atypical wound* measures 1" in diameter and is surrounded with an eccentric abrasion margin. No soot or stippling is noted on the surrounding skin. The exit wound is on the left upper back, 13" from the top of the head and 3" left of the posterior midline. The shored exit wound* measures ¼" in diameter and is surrounded with asymmetric elliptical abrasion, measuring 1/16" at the 12 o'clock position and 5/8" in maximum width at the 6 o'clock position. The wound trajectory is right-to-left, front-to-back and downward. The projectile passes through the muscles of the right neck with laceration of the external jugular vein and the proximal part of the right innominate artery, through the right 2nd rib posteriorly, through the 2-4 thoracic vertebrae (T2-T4) transecting the spinal cord at T3, and through the left 4th rib posteriorly, exiting the left upper back. Contusions of the apex of both lungs and bilateral hemothoraces are noted, 100 cc on the right and 200 cc on the left. A yellow copper-colored metal jacket is recovered from the muscles of the back adjacent to the exit wound; photographed and submitted as evidence.

* **Note:** See "Opinion".

Other Injuries:
A superficially penetrating wound is noted on the distal anterior surface of the right thigh, 46" from the top of the head, and on the anterior midline of the extremity, and measures ½" in its largest dimension. A small fragment of yellow copper-colored "jacket" is recovered from the wound, photographed and submitted as evidence. No underlying significant injury is present.

Minor superficial abrasions are noted on the left elbow, posterior left shoulder and the posterior surface of the left forearm with no underlying significant injury or fractures. A small postmortem contusion is noted on the posterior surface of the distal right arm, with no associated injury.

INTERNAL EXAMINATION

See evidence of internal injuries of the neck and chest. No non-firearm injuries or abnormalities are noted.

BODY CAVITIES:
See "Evidence of Injury".
The body is opened by the usual thoraco-abdominal incision and the chest plate is removed. No adhesions are noted. The chest and abdominal cavities reveal no non-traumatic abnormalities. The body organs are present in its normal anatomical position. The subcutaneous fat layer of the abdominal wall is unremarkable.

HEAD: (CENTRAL NERVOUS SYSTEM)
The scalp is intact. No subgaleal hemorrhage is present. The skull is intact. The brain is grossly unremarkable. Serial sections through the cerebral hemispheres, cerebellum and brain stem, reveal no gross abnormality. The brain weighs 1500 grams.

NECK:
See "Evidence of Injury".
Examination of the anterior and posterior soft tissues of the neck, including strap muscles, thyroid gland and large vessels, reveal no non-traumatic abnormalities. The hyoid bone and larynx are intact.

CARDIOVASCULAR SYSTEM:
See "Evidence of Injury"
The pericardial sac is intact. The pericardial surfaces are smooth, glistening and unremarkable; the pericardial sac is free of adhesions. The coronary arteries arise normally, follow the usual distribution and are widely patent, with no evidence of atherosclerosis. 320 grams heart is unremarkable. The myocardium is dark red-brown, firm and unremarkable. The valves exhibit the usual size-position relationship and are unremarkable.

The aorta and its major branches arise normally, follow the usual course, and are mostly free of significant atherosclerosis or non-traumatic abnormalities. The venae cavae and their major tributaries return to the heart in the usual distribution and are free of thrombi or non-traumatic abnormalities.

RESPIRATORY SYSTEM:
See "Evidence of Injury".
The upper airway is clear of debris, but reveals presence of blood. The mucosal surfaces are smooth, yellow-tan and unremarkable. The non-injured pleural surfaces are smooth, glistening and unremarkable bilaterally. The pulmonary non-injured parenchyma reveals evidence of aspiration of blood in both lungs, but otherwise is grossly unremarkable. The pulmonary arteries are normally developed, patent and without thrombus or embolus. The right and left lungs weigh 340 and 280 grams, respectively.

LIVER & BILIARY SYSTEM:
The hepatic capsule is smooth, glistening and unremarkable covering dark red-brown parenchyma. The liver parenchyma is grossly unremarkable. The gallbladder is intact and unremarkable. The liver weighs 1260 grams. The gallbladder is intact and contains dark bile. The extrabiliary system is grossly unremarkable.

ALIMENTARY TRACT:
The oral cavity reveals no abnormalities. The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds and the lumen contains a small amount of tan fluid, submitted for toxicology. The small and large bowels are

unremarkable. The pancreas has a normal pink-tan lobulated appearance and the ducts are clear. The appendix is present and unremarkable.

GENITOURINARY SYSTEM:
The kidneys are unremarkable. 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. The urinary bladder mucosa is gray-tan and unremarkable and contains clear yellow urine. The right and left kidneys weigh 120 grams each. The prostate gland and testes are unremarkable.

RETICULOENDOTHELIAL SYSTEM:
The 200 grams spleen is unremarkable with a smooth capsule covering red-purple, mildly soft parenchyma. The lymphoid follicles are unremarkable. The lymph nodes encountered during autopsy are not enlarged and are unremarkable.

ENDOCRINE SYSTEM:
The pituitary, thyroid, and adrenal glands are grossly unremarkable.

MUSCULOSKELETAL SYSTEM:
See "Evidence of Injuries".
No non-traumatic bone or joint abnormalities are noted.

EVIDENCE COLLECTION

Two yellow, copper-colored metal fragments consistent with a projectile's jacket are recovered from the left upper back and the anterior distal right thigh. Both are photographed for documentation, submitted as evidence and retained by OAFME.

IDENTIFYING MARKS

A tattoo is noted on the left upper back; photographed for documentation. No major surgical scars or other identifying marks are noted.

NATURAL DISEASES

None noted.

MEDICAL INTERVENTION

None noted.

POSTMORTEM CHANGES

See "External Examination".

TOXICOLOGY

- Volatiles (Blood and Vitreous fluid):
  - No ethanol was detected.

- Screened drugs of abuse and medications (Urine):
  - Positive for mefloquine.
  - Negative for other medications and illicit drugs of abuse.

ADDITIONAL PROCEDURES

- Documentary photographs are taken by an OAFME photographer, Mr. Godwin and HM2 Tabeta.
- Full body radiographs and CT-scan are obtained.
- Specimens retained for toxicological and/or DNA identification are: Blood (heart and chest cavity)*, vitreous fluid, bile, urine, stomach contents, and tissue samples from liver, lung, kidney, spleen, brain, psoas and heart muscles, and adipose tissue.
- Representative sections of organs are retained in formalin without preparation of histological slides.
- Personal effects are documented, photographed and released to the appropriate mortuary operations representative.

* NOTE: No peripheral blood is available.

FINAL AUTOPSY DIAGNOSIS

I. Perforating Gunshot Wound to the Neck:
- Entrance Wound: Atypical wound on the right side of the neck.
- Exit Wound: A shored wound on the left upper back.
- Trajectory: right-to-left, front-to-back, and downward.
- Projectile Path: right strap muscles of the neck, right chest wall (posterior), T2-T4 vertebrae, left chest wall (posterior)
- Injuries: Lacerations of the right jugular vein and right innominate artery; contusions of the upper lobes of both lungs; fractures of T2-T4 with transaction of the spinal cord at T3; bilateral hemothoraces.
- Evidence: A metal fragment from the left upper back.

II. Other Injuries:

- Penetrating wound of the anterior surface of the distal right thigh.
  - A metal fragment is recovered.
- Minor abrasions of the left upper extremity of no clinical significance.

III. Toxicological Results:

- Positive for mefloquine. Negative for ethanol, other screened medications and illicit drugs of abuse.

OPINION

SPC Michael P. Scusa, US Army and a 22 year-old Caucasian man, died from a perforating GSW to the right side of the neck that exited the left upper back. The entrance wound is "atypical" wound indicating that the projectile passed through an intermediary object prior to striking the neck (possibly the protective neck yoke). The exit wound is a "shored" exit most probably due to the projectile striking the posterior protective plate of the personal protective vest. The projectile lacerated two major vessels in the neck, the right jugular vein and right innominate artery, and transected the upper thoracic spinal cord at T3. A small fragment of a copper jacket is recovered from the superficial muscles of the right thigh, with no associated significant injury. There is no evidence of close range discharge of a firearm on the surrounding skin. Toxicological studies are negative for ethanol, screened medications and illicit drugs of abuse. Manner of death is "Homicide".

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(b)(6) , MD
COL, USAF, MC, FS
Deputy Medical Examiner

QC
16 OCT 09
TT

DEPARTMENT OF DEFENSE
ARMED FORCES INSTITUTE OF PATHOLOGY
WASHINGTON, DC 20306-6000

REPLY TO
ATTENTION OF

AFIP-FME-FT

TO:

OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
ARMED FORCES INSTITUTE OF PATHOLOGY
WASHINGTON, DC 20306-6000

PATIENT IDENTIFICATION

AFIP Accessions Number	**Sequence**
3143505	00

Name
SCUSA, MICHAEL PATRICK

SSN: (b)(6) 9599 **Autopsy:** ME09-0686
Toxicology Accession #: 095107
Date Report Generated: October 13, 2009

CONSULTATION REPORT ON CONTRIBUTOR MATERIAL

AFIP DIAGNOSIS **REPORT OF TOXICOLOGICAL EXAMINATION**

Condition of Specimens: GOOD
Date of Incident: 10/4/2009 **Date Received:** 10/8/2009

VOLATILES: The **BLOOD AND VITREOUS FLUID** were examined for the presence of ethanol at a cutoff of 20 mg/dL. No ethanol was detected.

DRUGS: The **URINE** was screened for amphetamine, antidepressants, antihistamines, barbiturates, benzodiazepines, cannabinoids, chloroquine, cocaine, dextromethorphan, lidocaine, narcotic analgesics, opiates, phencyclidine, phenothiazines, sympathomimetic amines and verapamil by gas chromatography, color test or immunoassay. The following drugs were detected:

Positive Mefloquine: Mefloquine was detected in the urine by gas chromatography and confirmed by gas chromatography/mass spectrometry.

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(b)(6) , PhD, DABFT
Director, Forensic Toxicology Laboratory
Office of the Armed Forces Medical Examiner

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