

# ARMED FORCES INSTITUTE OF PATHOLOGY

Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 1-800-944-7912



#### AUTOPSY EXAMINATION REPORT

Name: Mousa Al Jbori, Mahmood Ismaeel Mosa
Intermemt Serial Number (b)(6)

Date of Birth: (b)(6)

Date of Death (b)(6)

Date of Autopsy: 5 February 2005

Date of Report: 14 March 2005

Autopsy No.: (b)(6)

AFIP No.: (b)(6)

Rank: Iraqi national, civilian

Place of Death: Bucca, Iraq

Place of Autopsy: Baghdad, Iraq

Circumstances of Death: This 38 year-old male civilian, presumed Iraqi national was in US custody at the Bucca detention facility in Iraq. By report, he was shot during a prison riot.

Authorization for Autopsy: The Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Visual, per detention facility records; postmortem fingerprints and DNA profile obtained.

CAUSE OF DEATH: Gunshot Wound of the Torso

MANNER OF DEATH: Homicide

# FINAL AUTOPSY DIAGNOSES:

- Penetrating Gunshot Wound of the Torso
  - Indeterminate range entrance wound of posterior aspect (back) of left shoulder with no surrounding soot or stippling
  - Wound path through skin and soft tissue of the upper left back, the left scapula, posterior aspect of the left chest wall through the 4<sup>th</sup> rib, left lower lung lobe, diaphragm, liver and stomach
  - c. Wound associated with bilateral hemothoraces, 300 ml blood in the right pleural space and 1,000 ml blood in the left pleural space; hemopericardium, 100 ml blood; hemoperitoneum, 500 ml blood; fracture of the left scapula; fracture of the posterior lateral aspect of the left 4<sup>th</sup> rib; perforation of the left lower lung lobe and left hemidiaphragm; disruption of the left lobe of the liver; and multiple perforations of the stomach
  - d. No exit wound present
  - Multiple metallic fragments including a fragment of copper jacket and fragments of bullet core are recovered from within the stomach and submitted to US Army CID
  - f. No evidence of close range fire on the skin
  - g. Direction of wound path: Back to front, downward, and slightly left to right
- No evidence of significant natural disease, within the limitations of the examination
- III. No evidence of other significant injuries
  - a. Minor abrasions of anterior aspect of left knee
  - b. Minor contusion of back of left knee
- IV. No evidence of restraint
- V. Toxicology (AFIP)
  - a. Volatiles: Blood and vitreous fluid negative for ethanol
  - b. Drugs: Blood negative for screened medications and drugs of abuse

# EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished unclad Caucasian male. The body weighs approximately 160 pounds (estimated), is 68" in height and appears compatible with the reported age of 38 years. The body temperature is cold, that of the refrigeration unit. Rigor is present to an equal degree in all extremities. Lividity is present and fixed on the posterior surface of the body, except in areas exposed to pressure.

The scalp is covered with dark brown hair averaging 1.5 cm in length. Facial hair consists of a red brown beard and mustache. The irides are brown, and the comeae are slightly cloudy. The sclerae and conjunctivae are pale and free of petechiae. There are multiple freckles over the forehead. The earlobes are not pierced. The external auditory canals, external nares and oral cavity are free of foreign material and abnormal secretions. The nasal skeleton is palpably intact. The lips are without evident injury. The teeth are natural and in fair condition.

The neck is straight and the trachea is midline and mobile. The chest is symmetric and well developed. No injury of the ribs or sternum is evident externally. The abdomen is flat and soft. Healed surgical scars are not noted on the torso. The extremities are well developed with normal range of motion. There is a 1 x 0.3 cm scar on the right knee, and there is a 1 x 2 cm tan macule on the anterior aspect of the right thigh. The fingernails are intact. The soles of the feet are calloused, but they are clean and atraumatic. No tattoos are noted, and needle tracks are not observed. The external genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. The pubic hair is shaved but present in a normal distribution. The buttocks and anus are unremarkable. An identification tag is on the right first toe.

# EVIDENCE OF THERAPY

There is an endotracheal tube in place, and there is an intravenous catheter in the right antecubital fossa. There are two adhesive EKG tabs on the body, one on the upper anterior aspect of the right shoulder and one on the upper anterior aspect of the left shoulder. There are two adhesive defibrillator pads on the body, one on the upper anterior aspect of the right shoulder and one on the anterior lateral aspect of the left side of the chest. There is a "C" written on the back of the right hand in green ink.

## EVIDENCE OF INJURY

The ordering of the following injuries is for descriptive purposes only and is not intended to imply order of infliction or relative severity. All wound pathways are given relative to standard anatomic position.

There is dried blood streaking on the back of the hands and confluent over the back of the body. The palms of the hands are free of blood. There are two abrasions, 0.2 cm in diameter and 1 x 0.2 cm on the left knee. There is a 3 x 2 cm faint purple contusion on the back of the left knee.

## Gunshot Wound of the Torso

There is an indeterminate range entrance gunshot wound of the posterior aspect of the left shoulder. The wound is round, 0.3 cm in diameter, with an eccentric marginal abrasion rim from 10 o'clock to 2 o'clock with a maximum width of 0.3 cm at the 12 o'clock position. The entrance wound is located 14 cm to the left of posterior midline and 28 cm beneath the top of the head, and there is no soot or stippling surrounding the wound.

The wound path perforates the skin and soft tissue of the upper left back and the left scapula, and enters the posterior aspect of the left chest cavity through the posterior lateral aspect of the 4<sup>th</sup> left rib. The wound perforates the left lower lung lobe, the left hemidiaphragm, the liver, and stomach.

The wound is associated with bilateral hemothoraces with 300 ml of blood in the right pleural cavity and 1,000 ml of blood in the left pleural cavity; a hemopericardium with 100 ml blood in the pericardial sac; and a hemoperitoneum with 500 ml of blood in the abdominal cavity. The wound is also associated with fractures of the left scapula and posterior lateral aspect of the left 4th rib, parenchymal defects of the left lower lung lobe and the left lobe of the liver; perforation of the diaphragm; multiple perforations of the stomach; and hemorrhage and soft tissue destruction along the wound path.

A fragment of copper jacket and multiple small metallic fragments of bullet core are recovered from within the stomach. No exit wound is present, and there is no evidence of close range fire on the skin. The direction of the wound path is from back to front, left to right, and downward.

## INTERNAL EXAMINATION

#### BODY CAVITIES:

The body is opened by the usual thoraco-abdominal incision and the chest plate is removed. No adhesions are present in any of the body cavities. All body organs are present in the normal anatomical position. The vertebral bodies are visibly and palpably intact. The subcutaneous fat layer of the abdominal wall is 2 cm thick.

## HEAD: (CENTRAL NERVOUS SYSTEM)

The scalp is reflected, and there is no skull fractures found. The calvarium of the skull is removed. The dura mater and falx cerebri are intact. There is no epidural or subdural hemorrhage present. The leptomeninges are thin and delicate. The cerebrospinal fluid is clear. The cerebral hemispheres are symmetrical. The structures at the base of the brain, including cranial nerves and blood vessels, are intact. Coronal sections through the cerebral hemispheres reveal no lesions, and there is no evidence of infection, tumor, or trauma. The ventricles are of normal size. Transverse sections through the brain stem and cerebellum are unremarkable. The dura is stripped from the basilar skull, and no fractures are found. The atlanto-occipital joint is stable. The brain weighs 1480 grams.

#### NECK:

Examination of the soft tissues of the neck, including strap muscles, thyroid gland and large vessels, reveals no abnormalities. The anterior strap muscles of the neck are homogeneous and red-brown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa and is unobstructed. The thyroid gland is symmetric and red-brown, without cystic or nodular change. There is no evidence of infection, tumor, or trauma, and the airway is patent.

# CARDIOVASCULAR SYSTEM:

The pericardial surfaces are smooth, glistening and unremarkable; the pericardial sac is free of significant fluid and adhesions. A moderate amount of epicardial fat is present. The coronary arteries arise normally, follow a right dominant distribution and are widely patent, without evidence of significant atherosclerosis or thrombosis. The chambers and valves exhibit the usual size-position relationship and are unremarkable. The myocardium is dark red-brown, firm and unremarkable; the atrial and ventricular septa are intact. The left ventricle is 1.1 cm in thickness and the right ventricle is 0.2 cm in thickness. The aorta and its major branches arise normally, follow the usual course and are widely patent, free of significant atherosclerosis and other abnormality. The venae cavae and their major tributaries return to the heart in the usual distribution and are free of thrombi. The heart weighs 278 grams.

## RESPIRATORY SYSTEM:

The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth, yellow-tan and unremarkable. The pleural surfaces are smooth, glistening and unremarkable bilaterally. The pulmonary parenchyma is red-purple, exuding a slight amount of bloody fluid. The injuries of the left lower lung lobe are as previously described. No other focal lesions are noted. The pulmonary arteries are normally developed, patent and without thrombus or embolus. The right lung weighs 383 grams; the left 237 grams.

## LIVER & BILIARY SYSTEM:

The injuries of the liver are as previously described. The hepatic capsule is otherwise smooth, glistening and intact, covering dark red-brown, moderately congested parenchyma with no focal lesions noted. The gallbladder contains 3 ml of green-brown, mucoid bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi. The liver weighs 1169 grams.

## ALIMENTARY TRACT:

The tongue is free of bite marks, hemorrhage, or other injuries. The esophagus is lined by gray-white, smooth mucosa. The injuries of the stomach are as previously described. The gastric mucosa is otherwise arranged in the usual rugal folds and the lumen contains a film of tan fluid. The small and large bowel are unremarkable. The pancreas has a normal pinktan lobulated appearance and the ducts are clear. The appendix is present and is unremarkable.

# GENITOURINARY SYSTEM:

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. White bladder mucosa overlies an intact bladder wall. The urinary bladder contains 60 ml of clear, yellow urine. The prostate gland is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities. The right kidney weighs 117 grams; the left 119 grams.

# RETICULOENDOTHELIAL SYSTEM:

The spleen has a smooth, intact capsule covering red-purple, moderately firm parenchyma; the lymphoid follicles are unremarkable. The regional lymph nodes appear normal. The spleen weighs 59 grams.

# ENDOCRINE SYSTEM:

The pituitary, thyroid and adrenal glands are unremarkable.

# MUSCULOSKELETAL SYSTEM:

Muscle development is normal. No bone or joint abnormalities are noted.

# MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histologic slides.

# ADDITIONAL PROCEDURES

- Full body radiographs were obtained and reflect the injuries described above.
- Documentary photographs are taken by OAFME photographers
- Metallic fragments recovered are submitted to US Army CID
- Specimens retained for toxicologic testing and/or DNA identification are: vitreous fluid, femoral blood, heart blood, left chest cavity blood, urine, bile, liver and spleen
- The dissected organs are forwarded with the body
- Personal effects are released to the appropriate mortuary operations representative

# OPINION

This 38 year-old male Iraqi civilian in US custody died of a gunshot wound of the torso, which perforated his left lower lung and liver, causing internal bleeding. By report, he was shot during a prison riot at the Bucca detention facility.

The manner of death is homicide.

(b)(6)		
(b)(6)	Medical Examiner	_



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

WASHINGTON	, DC 20306-6000
REPLY TO	
ATTENTION OF	
AFIP (b)(6)	
	PATIENT IDENTIFICATION
122	AFIP Accessions Number Sequence
TO:	(b)(6)
	Name
OFFICE OF THE ARMED FORCES MEDICAL	MOUSA/AL JBORI, MAHMOOD I.
ARMED FORCES INSTITUTE OF PATHOLOGY	SSAN: Autopsy: (b)(6)
WASHINGTON, DC 20306-6000	SSAM: Autopsy:
WASHINGTON, DC 2000-0000	Toxicology Accession #: (b)(6)
	Date Report Generated: February 24, 2005
CONSULTATION DEPORT O	N CONTRIBUTOR MATERIAL
CONSULTATION REPORT OF	N CONTRIBUTOR MATERIAL
AFIP DIAGNOSIS REPORT O	F TOXICOLOGICAL EXAMINATION
Condition of Specimens: GOOD	
	te Received: 2/16/2005
VOLATILES: The BLOOD AND VIT	REOUS FLUID were examined for the
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	oroquine, cocaine, dextromethorphan, lidocaine.
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detected:	
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DD 5284, 2064

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	DISPOSITION OF REMAINS				
NAME OF MORTICIAN PREPARING REMAINS	GRADE	LICENSE NUMBER AND STATE	OTHER		
INSTALLATION OR ADDRESS DATE		SIGNATURE			
NAME OF CEMETERY OR CREMATORY	LOCATION OF CEMETERY OR CREMATORY				
TYPE OF DISPOSITION		DATE OF DISPOSITION			
	REGISTRATION OF VITAL STATISTICS				
REGISTRY (Town and Country)	DATE REGISTERED	FILE NUMBER			
		STATE	OTHER		
NAME OF FUNERAL DIRECTOR	ADDRESS				
SIGNATURE OF AUTHORIZED INDIVIDUAL					
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# ARMED FORCES INSTITUTE OF PATHOLOGY Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 1-800-944-7912



## AUTOPSY EXAMINATION REPORT

Name: Hamed Al Mu Farji, Khalced Yussen Hamad Autopsy No. (b)(6)
Intermernt Serial Number (b)(6)

Date of Birth: (b)(6)

Date of Death (b)(6)

Date of Autopsy: 5 February 2005

Date of Report: 14 March 2005

Name: Iraqi national, civilian
Place of Death: Bucca, Iraq
Place of Autopsy: Baghdad, Iraq

Circumstances of Death: This 36 year-old male civilian, presumed Iraqi national was in US custody at the Bucca detention facility in Iraq. By report, he was shot during a prison riot.

Authorization for Autopsy: The Armed Forces Medical Examiner, IAW 10 USC 1471.

**Identification:** Visual, per detention facility records; postmortem fingerprints and DNA profile obtained.

CAUSE OF DEATH: Gunshot Wound of the Head

MANNER OF DEATH: Homicide

# FINAL AUTOPSY DIAGNOSES:

- Perforating Gunshot Wound of the Head
  - Indeterminate range entrance wound of posterior aspect (back) of the head just below the hairline at posterior midline with no surrounding soot or stippling
  - Wound path through skin and soft tissue of the lower occipital scalp at the superior base of the neck, the second cervical vertebra and spinal cord, nasopharynx and bridge of nose
  - c. Wound associated with fractures of the second cervical vertebra, transection of the cervical spinal cord at the level of the second cervical vertebra, subarachnoid hemorrhage over the brain, and fractures of the nasal, ethmoid and maxillary bones
  - d. Stellate exit wound present at the bridge of the nose
  - e. No metallic projectiles recovered or evident radiographically
  - f. No evidence of close range fire on the skin
  - g. Direction of wound path: Back to front and upward
- II. No evidence of significant natural disease, within the limitations of the examination
- III. No evidence of other significant injuries
  - a. Minor abrasions of forehead
- IV. No evidence of restraint
- V. Toxicology (AFIP)
  - a. Volatiles: Heart blood and vitreous fluid negative for ethanol
  - b. Drugs: Heart blood negative for screened medications and drugs of abuse

# EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished unclad Caucasian male. The body weighs approximately 160 pounds (estimated), is 69" in height and appears compatible with the reported age of 36 years. The body temperature is cold, that of the refrigeration unit. Rigor is present to an equal degree in all extremities. Lividity is present and fixed on the posterior surface of the body, except in areas exposed to pressure.

The scalp is covered with dark brown hair averaging 2 cm in length. Facial hair consists of a brown with grey beard and mustache. The irides are brown, and the comeae are slightly cloudy. The sclerae and conjunctivae are pale and free of petechiae. The earlobes are not pierced. The external auditory canals and oral cavity are free of foreign material and abnormal secretions. The lips are without evident injury. The teeth are natural and in fair condition.

The neck is straight and the trachea is midline and mobile. The chest is symmetric and well developed. No injury of the ribs or sternum is evident externally. The abdomen is flat and soft. Healed surgical scars are not noted on the torso. The extremities are well developed with normal range of motion. There is a 4 cm linear scar on the upper right shin, and there is a 5 cm linear scar on the back of the right calf. The fingernails are intact. The soles of the feet are calloused. No tattoos are noted, and needle tracks are not observed. The external genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. The pubic hair is present in a normal distribution. The buttocks and anus are unremarkable. An identification tag is on the right first toe.

# EVIDENCE OF THERAPY

There is an oropharyngeal airway in place, and there is an intravenous catheter in the left antecubital fossa. There is an "A" written on the back of the left hand in green ink.

# EVIDENCE OF INJURY

The ordering of the following injuries is for descriptive purposes only and is not intended to imply order of infliction or relative severity. All wound pathways are given relative to standard anatomic position.

#### Gunshot Wound of the Head

There is an indeterminate range entrance gunshot wound of the posterior aspect of the head, just below the hairline. The wound is round, 0.2 cm in diameter, with an eccentric 0.1 cm marginal abrasion rim from the 3 o'clock to 6 o'clock position. The entrance wound is located in the posterior midline, 18 cm beneath the top of the head, and 1 cm beneath the edge of the hairline. There is no soot or stippling on the skin surrounding the wound.

The wound path perforates the skin and soft tissue of the lower occipital scalp and upper posterior neck at the posterior midline, continues through the second cervical vertebra (axis) and cervical spinal cord, and through the nasopharynx just below the sphenoid sinus and cribiform plate, and exits through the nasal bones out the bridge of the nose directly between the eyes.

The wound is associated with fractures of the second cervical vertebra, complete transection of the cervical spinal cord at the level of the second cervical vertebra, diffuse subarachnoid hemorrhage over the brain, a film of subdural hemorrhage at the base of the brain, fractures of the maxillary, ethmoid and nasal bones, and hemorrhage and soft tissue destruction along the wound path.

There is a 3 x 3 cm stellate exit wound at the bridge of the nose, located on the anterior midline, 10 cm beneath the top of the head and directly between the eyes.

No metallic projectiles are recovered or evident radiographically, and there is no evidence of close range fire on the skin. The direction of the wound path is from back to front and upward.

# INTERNAL EXAMINATION

# **BODY CAVITIES:**

The body is opened by the usual thoraco-abdominal incision and the chest plate is removed. No adhesions or abnormal collections of fluid are present in any of the body cavities. All body organs are present in the normal anatomical position. The vertebral bodies are visibly and palpably intact. The subcutaneous fat layer of the abdominal wall is 2 cm thick.

# HEAD: (CENTRAL NERVOUS SYSTEM)

The injuries of the head are as previously described. The scalp is reflected, and there are no other skull fractures found. The calvarium of the skull is removed. The dura mater and falx cerebri are intact. There is no epidural hemorrhage present. The leptomeninges are thin and delicate. The cerebral hemispheres are symmetrical. The structures at the base of the brain, including cranial nerves and blood vessels, are intact. Coronal sections through the cerebral hemispheres revealed no lesions, and there is no evidence of infection, tumor, or trauma. The ventricles are of normal size. Transverse sections through the brain stem and cerebellum are unremarkable. The dura is stripped from the basilar skull, and no fractures are found. The atlanto-occipital joint is stable. The brain weighs 1440 grams.

#### NECK:

Examination of the soft tissues of the anterior neck, including strap muscles, thyroid gland and large vessels, reveals no abnormalities. The anterior strap muscles of the neck are homogeneous and red-brown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa and is unobstructed. The thyroid gland is symmetric and red-brown, without cystic or nodular change. There is no evidence of infection, tumor, or trauma, and the airway is patent.

# CARDIOVASCULAR SYSTEM:

The pericardial surfaces are smooth, glistening and unremarkable; the pericardial sac is free of significant fluid and adhesions. A moderate amount of epicardial fat is present. The coronary arteries arise normally, follow a right dominant distribution and are widely patent, without evidence of significant atherosclerosis or thrombosis. The chambers and valves exhibit the usual size-position relationship and are unremarkable. The myocardium is dark red-brown, firm and unremarkable; the atrial and ventricular septa are intact. The left ventricle is 1.1 cm in thickness and the right ventricle is 0.2 cm in thickness. The aorta and its major branches arise normally, follow the usual course and are widely patent, free of significant atherosclerosis and other abnormality. The venae cavae and their major tributaries return to the heart in the usual distribution and are free of thrombi. The heart weighs 420 grams.

## RESPIRATORY SYSTEM:

The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth, yellow-tan and unremarkable. The pleural surfaces are smooth, glistening and unremarkable bilaterally. The pulmonary parenchyma is red-purple, exuding a slight amount of bloody fluid, and no focal lesions are noted. The pulmonary arteries are normally developed, patent and without thrombus or embolus. The right lung weighs 540 grams; the left 520 grams.

## LIVER & BILIARY SYSTEM:

The hepatic capsule is smooth, glistening and intact, covering dark red-brown, moderately congested parenchyma with no focal lesions noted. The gallbladder contains 3 ml of green-brown, mucoid bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi. The liver weighs 1370 grams.

# ALIMENTARY TRACT:

The tongue is free of bite marks, hemorrhage, or other injuries. The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds and the lumen contains approximately 500 ml of white thick liquid. The small and large bowel are unremarkable. The pancreas has a normal pink-tan lobulated appearance and the ducts are clear. The appendix is present and is unremarkable.

## GENITOURINARY SYSTEM:

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 pyrarnids, which are red-purple to tan and unremarkable. The calyces, pelves and ureters are unremarkable. White bladder mucosa overlies an intact bladder wall. The urinary bladder contains 15 ml of clear, yellow urine. The prostate gland is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities. The right kidney weighs 120 grams; the left 120 grams.

# RETICULOENDOTHELIAL SYSTEM:

The spleen has a smooth, intact capsule covering red-purple, moderately firm parenchyma; the lymphoid follicles are unremarkable. The regional lymph nodes appear normal. The spleen weighs 150 grams.

# ENDOCRINE SYSTEM:

The pituitary, thyroid and adrenal glands are unremarkable.

# MUSCULOSKELETAL SYSTEM:

Muscle development is normal. No bone or joint abnormalities are noted.

# MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histologic slides.

# ADDITIONAL PROCEDURES

- Full body radiographs were obtained and reflect the injuries described above.
- Documentary photographs are taken by OAFME photographers
- Specimens retained for toxicologic testing and/or DNA identification are: vitreous fluid, heart blood, urine, bile, liver, spleen, and gastric contents
- The dissected organs are forwarded with the body
- Personal effects are released to the appropriate mortuary operations representative

# **OPINION**

This 36 year-old male Iraqi civilian in US custody died of a gunshot wound of the head, causing fractures of the 2<sup>nd</sup> cervical vertebra (axis) with transection of the cervical spinal cord. By report, he was shot during a prison riot at the Bucca detention facility.

The manner of death is homicide.		
(b)(6)		
(b)(6)		



# DEPARTMENT OF DEFENSE ARMED FORCES INSTITUTE OF PATHOLOGY WASHINGTON, DC 20305-4000

ATTENTION OF					
AFIP. (b)(6)					
100	PATIENT IDENTIFICATION				
	AFIP Accessions Number Sequence				
TO:	(b)(6)				
	Name				
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER	HAMED AL MU FARJI, KHALEED				
ARMED FORCES INSTITUTE OF PATHOLOGY	SSAN: Autopsy: (b)(6)				
WASHINGTON, DC 20306-6000	Toxicology Accession #: (b)(6)				
5.	Date Report Generated: February 24, 2005				
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CONSULTATION REPORT OF	CONTRIBUTOR MATERIAL				
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AFIP DIAGNOSIS REPORT OF	TOXICOLOGICAL EXAMINATION				
Condition of Specimens: GOOD					
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Date of Incident/19/(9) Food	Discoured. Dioi2003				
the presence of ethanol at a cutoff of 20 mg/dL.	ND VITREOUS FLUID were examined for No ethanol was detected.				
DRUGS: The HEART BLOOD was scr antihistamines, barbiturates, benzodiazepines, car dextromethorphan, lidocaine, narcotic analgesics, sympathomimetic amines and verapamil by gas of The following drugs were detected:	nnabinoids, chloroquine, cocaine, opiates, phencyclidine, phenothiazines,				
None were found.					
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Office of the Armed Forces Medical Examiner	Office of the Armed Forces Medical Examiner				

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#### (REMOVE, REVERSE AND RE-INSERT CARBONS BEFORE COMPLETING THIS SIDE)

	DISPOSITION OF REMAINS			
NAME OF MORTICIAN PREPARING REMAINS	GRADE	LICENSE NUMBER AND STATE	OTHER	
INSTALLATION OF ADDRESS	DATE	SIGNATURE		
NAME OF CEMETERY OR CREMATORY	LOCATION OF CEMET	TERY OR CREMATORY		
TYPE OF DISPOSITION		DATE OF DISPOSITION		
	REGISTRATION OF VITAL STATISTICS			
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NAME OF FUNERAL DIRECTOR	ADDRESS	ADORESS		
SIGNATURE OF AUTHORIZED INDIVIDUAL				

DD FORM 2064, APR 1977 (BACK)

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# ARMED FORCES INSTITUTE OF PATHOLOGY Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 1-800-944-7912



## FINAL AUTOPSY REPORT

Name: Mohammed Salun, Sohaib Mansoor Intermernt Serial Number (b)(6) Date of Birth: (b)(6) 1973 Date of Death (b)(6) 2005 Date of Autopsy: 04 February 2005

Date of Report: 12 April 2005

Autopsy No.: (b)(6) AFIP No .: (b)(6) Rank: Civilian, Iraqi national

Place of Death: Bucca, Iraq

Place of Autopsy: Baghdad, Iraq

Circumstances of Death: This 32 year-old male, presumed Iraqi national, civilian detainee was found unresponsive while in US custody at the Bucca detention facility in Iraq, and resuscitation efforts were unsuccessful.

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

Identification: Visual, per detention facility records; postmortem fingerprints and DNA profile obtained.

CAUSE OF DEATH: Atherosclerotic cardiovascular disease

MANNER OF DEATH: Natural

#### FINAL AUTOPSY DIAGNOSES:

- Atherosclerotic cardiovascular disease (Cardiovascular Pathology consultation)
  - a. Moderate coronary artery atherosclerosis
    - Left anterior descending artery (LAD): 40% luminal narrowing of proximal LAD by pathologic intimal thickening with smooth muscle rich intimal proliferation
    - Left circumflex artery (LCA): 50% narrowing of proximal LCA by proximal intimal thickening
    - Right coronary artery (RCA): 60% narrowing of proximal to mid RCA by pathologic intimal thickening with smooth muscle rich neotintimal proliferation
  - Mild dysplasia of atrioventricular nodal artery with increased fibrosis in branching bundle and crest of ventricular septum
  - c. Heart, 395 gm
- II. Diffuse hypoxic-ischemic changes of brain
  - a. Brain, 1674 gm
  - b. AFIP Neuropathology consultation
    - Shrunken eosinophilic cytoplasm and indistinct nuclei and glia with pyknotic nuclei and eosinophilic cytoplasm in cerebral cortex, basal ganglia, hippocampal formation, brainstem and cerebellum
- III. No evidence of significant injury
  - a. No external or internal evidence of trauma
- IV. No evidence of physical restraint
- V. Early decompositional changes
  - a. Mold growth over face and back of neck
  - b. Green discoloration of upper abdomen
  - c. Focal skin slippage
  - d. Focal drying of fingers
  - e. Dark discoloration of internal organs, including brain
  - f. Decompositional fluid in bilateral pleural cavities, 50 ml each side
- VI. Toxicology (AFIP)
  - a. Volatiles: Blood negative for ethanol
  - b. Drugs: Heart blood negative for screened medications and drugs of abuse

# EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished Caucasian male clad in a pair of black sweat pants with a white NBA logo and a pair of white boxer shorts. The body is received on top of a grey and red blanket with multiple loose medical devices including a suction container with apparent gastric contents, a white plastic board, a facial mask, a laryngoscope and a white wire. The body weighs approximately 180 pounds (estimated), is 72" in height and appears compatible with the reported age of 32 years. The body temperature is cold, that of the refrigeration unit. Rigor has dissipated, and the body is flaccid. Lividity is present and fixed on the posterior surface of the body, except in areas exposed to pressure.

The scalp is covered with dark brown hair in a normal distribution averaging 1.5 cm in length on the top and shorter on the sides. Facial hair consists of a dark brown beard and mustache. The irides are brown. The corneae are cloudy. The sclerae and conjunctivae are pale and free of petechiae. The earlobes are not pierced. The external auditory canals, external nares and oral cavity are free of foreign material and abnormal secretions. The nasal skeleton is palpably intact. The lips are without evident injury. The teeth are natural and in fair condition.

There are early decompositional changes including the previously described corneal clouding and loss of rigor. There are also multiple patches of white and green mold growth on face and back of the neck, the majority of which wipes free easily. There is green discoloration of the upper abdomen and dark drying of the fingers and hands. There is focal skin slippage around the ankles.

The neck is straight and the trachea is midline and mobile. The chest is symmetric and well developed. No injury of the ribs or sternum is evident externally. The abdomen is flat and soft. Healed surgical scars of the torso are not noted. The extremities are well developed with normal range of motion. The fingernails are intact. The soles of the feet are calloused and hyperkeratotic. There is a 4 cm scar on the left hand at the base of the thumb, and there is a 0.5 cm pustule on the back of the left upper thigh. No tattoos are noted, and needle tracks are not observed. The external genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The buttocks and anus are unremarkable. An identification tag is attached to the first toe on the right foot.

## EVIDENCE OF THERAPY

There are a total of nine adhesive EKG pads on the body; one on the right shoulder, one on the left shoulder, one on the upper right side of the chest, five on the upper left side of the chest and one on the lower left side of the abdomen. There is an intravenous catheter in the right antecubital fossa, secured with white tape, and there is a second piece of white tape on the lower aspect of the upper right arm. There is no other evidence of medical intervention.

# EVIDENCE OF INJURY

On external examination of the body and internal examination of the head, chest and abdomen, there is no evidence of injury.

# INTERNAL EXAMINATION

# **BODY CAVITIES:**

The body is opened by the usual thoraco-abdominal incision and the chest plate is removed. Other than accumulation of decompositional fluid (50 ml dark fluid each pleural cavity), the pleural, pericardial, and peritoneal cavities are unremarkable. All body organs are present in the normal anatomical position. The vertebral bodies are visibly and palpably intact. The subcutaneous fat layer of the abdominal wall is 2 cm thick. There is no internal evidence of blunt force or penetrating injury to the thoraco-abdominal region.

# HEAD: (CENTRAL NERVOUS SYSTEM)

The scalp is reflected, and there is no subgaleal hemorrhage or skull fractures found. The calvarium of the skull is removed. The dura mater and falx cerebri are intact. The brain is darkly discolored from decomposition, but there is no epidural or subdural hemorrhage present. The leptomeninges are thin and delicate. The cerebrospinal fluid is slightly dark but free of blood. The cerebral hemispheres are symmetrical. The structures at the base of the brain, including cranial nerves and blood vessels, are intact. Coronal sections through the cerebral hemispheres reveales no lesions, and there is no evidence of infection, tumor, or trauma. The ventricles are of normal size. Transverse sections through the brain stem and cerebellum are unremarkable. The dura is stripped from the basilar skull, and no fractures are found. The atlanto-occipital joint is stable. The brain weighs 1674 grams.

# NECK:

Examination of the soft tissues of the neck, including strap muscles, thyroid gland and large vessels, reveals no abnormalities. The anterior strap muscles of the neck are homogeneous and red-brown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa and is unobstructed. The thyroid gland is symmetric and red-brown, without cystic or nodular change. There is no evidence of infection, tumor, or trauma, and the airway is patent. Incision and dissection of the posterior neck demonstrates no deep paracervical muscular injury, hemorrhage, or fractures of the dorsal spinous processes.

#### CARDIOVASCULAR SYSTEM:

The pericardial surfaces are smooth, glistening and unremarkable; the pericardial sac is free of significant fluid and adhesions. A moderate amount of epicardial fat is present. The coronary arteries arise normally, follow a right dominant distribution and are widely patent, without evidence of significant atherosclerosis or thrombosis. The chambers and valves exhibit the usual size-position relationship and are unremarkable. The myocardium is dark red-brown and unremarkable; the atrial and ventricular septa are intact. The left ventricle is 1.0 cm in thickness and the right ventricle is 0.2 cm in thickness. The aorta and its major branches arise normally, follow the usual course and are widely patent, free of significant

atherosclerosis and other abnormality. The venae cavae and their major tributaries return to the heart in the usual distribution and are free of thrombi. The heart weighs 395 grams.

# RESPIRATORY SYSTEM:

The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth, yellow-tan and unremarkable. There are pleural adhesions involving the lower left lung lobe. The pleural surfaces are otherwise smooth, glistening and unremarkable bilaterally. The pulmonary parenchyma is red-purple, exuding a slight amount of bloody fluid; no focal lesions are noted. The pulmonary arteries are normally developed, patent and without thrombus or embolus. The right lung weighs 629 grams; the left 859 grams.

# LIVER & BILIARY SYSTEM:

The hepatic capsule is smooth, glistening and intact, covering dark red-brown, moderately congested parenchyma with no focal lesions noted. The gallbladder contains less than 1 ml of green-brown, mucoid bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi. The liver weighs 1936 grams.

# ALIMENTARY TRACT:

The tongue is free of bite marks, hemorrhage, or other injuries. The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds and the lumen contains 200 ml of semisolid digesting material including rice and pieces of orange. There are abdominal adhesions involving the right upper quadrant. The small and large bowel are otherwise unremarkable. The pancreas has a normal pink-tan lobulated appearance and the ducts are clear. The appendix is present and is unremarkable.

# GENITOURINARY SYSTEM:

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. White bladder mucosa overlies an intact bladder wall. The urinary bladder contains 5 ml of cloudy yellow urine. The prostate gland is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities. The right kidney weighs 170 grams; the left 175 grams.

# RETICULOENDOTHELIAL SYSTEM:

The spleen has a smooth, intact capsule covering red-purple, moderately firm parenchyma; the lymphoid follicles are unremarkable. The regional lymph nodes appear normal. The spleen weighs 322 grams.

# ENDOCRINE SYSTEM:

The pituitary, thyroid and adrenal glands are unremarkable.

## MUSCULOSKELETAL SYSTEM:

Muscle development is normal. No bone or joint abnormalities are noted.

# MICROSCOPIC EXAMINATION

HEART: See "Cardiovascular Pathology Report" below.

LUNGS: The alveolar spaces and small air passages show evidence of autolysis. Where well preserved, the alveoli are expanded and contain no significant inflammatory component or edema fluid. There is evidence of peri-mortem food aspiration (no inflammatory reaction). The alveolar walls are thin and not congested. The arterial and venous vascular systems are normal. The peribronchial lymphatics are unremarkable.

LIVER: The hepatic architecture is intact. The portal areas show no increased inflammatory component or fibrous tissue. The hepatic parenchymal cells are well-preserved with no evidence of cholestasis, fatty metamorphosis, or sinusoidal abnormalities.

SPLEEN: The capsule and white pulp are unremarkable. There is minimal congestion of the red pulp.

ADRENALS: The cortical zones are distinctive, and the medullae are not remarkable.

KIDNEYS: The subcapsular zones are unremarkable. The glomeruli are mildly congested without cellular proliferation, mesangial prominence, or sclerosis. The tubules show autolysis but are unremarkable. There is no interstitial fibrosis or significant inflammation. There is no thickening of the walls of the arterioles or small arterial channels. The transitional epithelium of the collecting system is normal.

BRAIN: See "Neuropathology Report" below.

THYROID: Unremarkable.

TESTES: Unremarkable.

# CARDIOVASCULAR PATHOLOGY REPORT

CV Path,	(b)(6)	

"DIAGNOSIS: (b)(6) Moderate coronary artery atherosclerosis; mild dysplasia of atrioventricular nodal artery with increased fibrosis in branching bundle and crest of ventricular septum

History: Approximately 32 year old male Iraqi detainee found dead in cot

Heart: 395 grams normal epicardial fat; closed foramen ovale; biventricular dilatation: left ventricular cavity diameter 45 mm, left ventricular free wall thickness 9 mm, ventricular septum thickness 9 mm; right ventricle thickness 4 mm, without gross scars or abnormal fat infiltrates; multiple anomalous delicate cordae in right ventricle between

papillary muscles and free wall; fenestrated non-coronary cusp of aortic valve; other valves unremarkable; early myocardial decomposition, otherwise unremarkable; histologic sections show unremarkable myocardium

Coronary arteries: Normal ostia; right dominance; moderate atherosclerosis:

Left anterior descending artery (LAD): 40% luminal narrowing of proximal LAD by
pathologic intimal thickening with smooth muscle rich intimal proliferation

Left circumflex artery (LCA): 50% narrowing of proximal LCA by pathologic intimal
thickening

Right coronary artery (RCA): 60% narrowing of proximal to mid RCA by pathologic intimal thickening with smooth muscle rich neointimal proliferation

Conduction system: The sinoatrtial node and sinus nodal artery are histologically unremarkable. The compact atrioventricular (AV) node shows right downward displacement, and mildly increased fat and vascularity. The AV nodal artery is mildly dysplastic with predominantly medial thickening and adventitial fibrosis. Focal subendocaridal and perivascular interstitial fibrosis is present in the crest of the ventricular septum. The penetrating bundle is centrally located in the fibrous body and exhibits increased proteoglycan and decreased cellular components without inflammation. There are no discernible increased proteoglycan and fibrosis. The proximal bundle branches are intact and also demonstrate increased proteoglycan and decreased cellular components without inflammation. There are no discernable bypass tracts between the AV node and ventricular septum.

Comment: Histologic examination is suboptimal due to post-mortem decomposition; however, the dyplastic AV nodal artery and fibrosis in the branching bundle and crest of ventricular septum are not artifactual. Although the histologic findings would be more likely to produce bundle branch block, similar changes have been described in association with sudden cardiac death, likely due to ventricular arrhythmia. The etiology of the fibrosis is unclear, possibly due to small vessel narrowing or a resolved prior inflammatory condition."

# NEUROPATHOLOGY REPORT

Department of Neuropathology and Ophthalmic Pathology, AFIP:

"We examined the multiple portions of fixed brain-tissue, measuring 20 x 15 x 2 cm in aggregate, submitted in reference to this case. This includes fragments consistent with cerebrum, cerebellum, brainstem and dura. No gross lesions are identified.

Histological sections submitted: 1. Cerebral cortex. 2. Medulla. 3. Medulla/uppermost cervical spinal cord. 4. Cerebellum. 5. Pons. 6. Cerebellum, dentate nucleus. 8. Basal ganglia. 9. Hippocampal area. 10. Dura.

All sections were processed in paraffin; histological slides were stained with H & E. This material was reviewed in conference by staff in the Department of Neuropathology and Ophthalmic Pathology.

Histologic sections show neurons with shrunken eosinophilic cytoplasm and indistinct nuclei, and glia with pyknotic nuclei and eosinophilic cytoplasm, in cerebral cortex, basal ganglia, hippocampal formatin, brainstem and cerebellum. These cellular features are consistent with diffuse hypoxic-ischemic changes. The dura shows no diagnostic histologic changes."

# ADDITIONAL PROCEDURES

- Documentary photographs are taken by OAFME photographers
- Specimens retained for toxicologic testing and/or DNA identification are: vitreous fluid, femoral blood, heart blood, urine, bile, spleen, liver, and gastric contents
- The dissected organs are forwarded with the body
- Personal effects are released to the appropriate mortuary operations representative

# OPINION

This 32 year-old male Iraqi detainee died in US custody of atherosclerotic cardiovascular disease, with moderate coronary artery atherosclerosis (three vessel disease) and mild dysplasia of the atrioventricular nodal artery with increased fibrosis in the branching bundle and crest of the ventricular septum. Fibrosis within the heart, particularly around the conduction system may initiate cardiac arrhythmias. There is no evidence of any external or internal trauma or evidence of physical restraint. No other significant natural disease within the limitations of the autopsy was found, and toxicologic studies are negative.

The manner of death is natural.

(b)(6)		
(b)(6)	Medical Examiner	



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

REPLY TO ATTENTION OF	
AFIP (b)(6)	
***************************************	PATIENT IDENTIFICATION AFIP Accessions Number Sequence
TO:	(b)(6)
	Name
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER	MOHAMMED SALAM, SOHAIB MANSOR
ARMED FORCES INSTITUTE OF PATHOLOGY	SSAN: Autopsy: (b)(6)
WASHINGTON, DC 20306-6000	Toxicology Accession #: (b)(6)
	Date Report Generated: February 27, 2005
CONSULTATION REPORT O	N CONTRIBUTOR MATERIAL
AFIP DIAGNOSIS REPORT O	F TOXICOLOGICAL EXAMINATION
Condition of Specimens: GOOD	
Date of Inciden (b)(6) 2005 Da	te Received: 2/16/2005
VOLATILES: The BLOOD was examing/dL. No ethanol was detected.	ned for the presence of ethanol at a cutoff of 20
DRUGS: The HEART BLOOD was so antihistamines, barbiturates, benzodiazepines, ca dextromethorphan, lidocaine, narcotic analgesic sympathomimetic amines and verapamil by gas The following drugs were detected:	s, opiates, phencyclidine, phenothiazines,
None were found.	
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			DEATH (OVERSEAS)			
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Symptômes précurseurs de la mort.	UNDERLYING CAUSE, IF ANY, GIVING RISE TO PRIMARY CAUSE Raison (ondementale, sit y a fieu syant suscité la cause primaire					
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ACCIDENT Mort accidentate						
SUICIDE Suicide	NAME OF PATHOLOGIST Nom du pathologiste (b)(6)					
HOMICIDE Homicide	(b)(6)		04 Feb 2005	AVIATION ACCIDENT Accident & Avion		
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b)(6)	OFFICER. Nom du médicin militaire ou d		TITLE OR DEGREE THIS	Medical Examiner		
b)(6)		OR ADDRESS Installation ou ad B. DE 19902	mase .			
DATE DON 24 March	SIGNATURE, F					
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DD 599, 2064

replaces da form 3545. I Jan 72 and da form 3545-ripasi, 24 Sep 75. Witich are obsolete.

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	DISPOSITION OF REMAINS		
NAME OF MORTICIAN PREPARING REMAINS	GRADE	LICENSE NUMBER AND STATE	OTHER
INSTALLATION OR ADDRESS	DATE	SIGNATURE	
NAME OF CEMETERY OR CREMATORY	LOCATION OF CEMET	ERY OR CREMATORY	
TYPE OF DISPOSITION		DATE OF DISPOSITION	
-	REGISTRATION OF VITAL STATISTICS		
REGISTRY (Town and Country)	DATE REGISTERED	FILE NUMBER	
		STATE	OTHER
NAME OF FUNERAL DIRECTOR	ADDRESS	ADDRESS	
SIGNATURE OF AUTHORIZED INDIVIDUAL			

DD FORM 2064, APR 1977 (BACK)

USAPA V1.00



# ARMED FORCES INSTITUTE OF PATHOLOGY Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 (301) 319-0000



# FINAL AUTOPSY REPORT

Name: MUTLIB, Ali Hussein Interment Serial (b)(6)	Autopsy No: (b)(6) AFIP No (b)(6)	
Date of Birth: (b)(6) 946	AFIP No (b)(b)	
Date of Death(b)(6) 2006	Place of Death: Camp Bucca, Iraq	
Date of Autopsy: 11 DEC 2006 @ 1200 Date of Report: 28 FEB 2007	Place of Autopsy: Dover AFB Port Mortuary. Delaware	
Circumstances of Death: (b)(6)	an Iraqi National male, was held as a detainee in	
Camp Bucca, Iraq. He was admitted to the heart and blood pressure problems. On (b) unresponsive. He expired despite cardiac res		
Authorization for Autopsy: Office of the A Title 10 US Code, Section 1471 (10 USC 14	Armed Forces Medical Examiner, in accordance with 71).	
Identification: Positive identification estab	blished by investigative agency	

CAUSE OF DEATH: Severe Atherosclerotic Cardiovascular Disease

MANNER OF DEATH: Natural

MUTLIB	(b)(6)

## **AUTOPSY FINDINGS:**

1. Severe Atherosclerotic Cardiovascular Disease

Heart: Cardiomegaly, 710 grams

Coronary arteries:

- i. Left main coronary artery 60% stenosis with concentric calcification
- ii. Left anterior descending coronary artery multifocal 95% stenosis
- iii. Right coronary artery multifocal 95% stenosis

Concentric left ventricular hypertrophy - left ventricular thickness - 2.5cm; septum 2.4 cm

Remote myocardial infarction, posterior-lateral left ventricle

Diffuse atherosclerosis of the abdominal aorta and iliac vessels with multiple
erosive plaques

#### II. Lungs:

- Marked bilateral pulmonary edema (combined weight 2220 grams)
- b. Diffuse anthracotic pigment, pleura and parenchymal
- c. Emphysema
- d. Bronchopneumonia

## III. Kidneys:

a. Marked arteriolonephrosclerosis (clinical history of hypertension)

## IV. Brain:

a. Incidental arteriovenous malformation of the left pons, 0.5 cm

#### V. Toxicology:

- VOLATILES: The blood and vitreous fluid are examined for the presence of ethanol at a cutoff level of 20 mg/dL. No ethanol is detected.
- Peripheral blood contains less than 1% carboxyhemoglobin (COHgb) determined by spectrophotometry with a limit of quantitation of 1%. COHgb saturations of 0-3% are expected for non-smokers and 3-10% for smokers. Saturations above 10% are considered elevated and are confirmed by gas chromatography.
- There is no cyanide detected in the blood. The limit of quantitation for cyanide is 0.25 mg/L. Normal blood cyanide concentrations are less than 0.15 mg/L. Lethal concentrations of cyanide are greater than 3 mg/L.
- DRUGS: The blood is screened for acetaminophen, amphetamine, antidepressants, antihistamines, barbiturates, benzodiazepines, cannabinoids, chloroquine, cocaine, dextromethorphan, lidocaine, narcotic analgesics, opiates, phencyclidine, phenothiazines, salicylates, sympathomimetic amines and verapamil by gas chromatography, color test or immunoassay. The following drugs are detected:
  - Lidocaine is detected in the blood by gas chromatography and confirmed by gas chromatography/mass spectrometry
  - Acetaminophen is detected in the blood by color test and confirmed by immunoassay. The blood contains 17mg/L of acetaminophen as quantitated by immunoassay.

# EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished, 71-inch tall, 202 pound male. Lividity is fixed on the posterior aspect of the body. Rigor has passed and the temperature of the body is cold, that of the refrigerator.

The scalp is covered with gray hair, with frontal balding. Facial hair consists of a gray beard and mustache. The irides are hazel and the conjunctivae are cloudy. The pupils are round and equal in diameter. The external auditory canals are unremarkable. The cars lobes have prominent creases and are otherwise unremarkable. The nares are patent and the lips are atraumatic. The nose and maxillae are palpably stable. The teeth are natural.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. The abdomen is protuberant. The genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The buttocks and anus are unremarkable.

The upper and lower extremities are symmetric and without clubbing or edema.

# CLOTHING AND PERSONAL EFFECTS

The deceased is clad in a hospital gown. Personal effects do not accompany the body.

## MEDICAL INTERVENTION

Endotracheal intubation; intravenous access devices in the right neck and left groin; needle
marks in both wrists; Foley catheter, cardiac monitor pads anterior chest; bandage covering
surgical incision right knee (stapled closed)

# RADIOGRAPHS

 A complete set of postmortem radiographs is obtained and demonstrates no acute injuries aside from those discussed in the evidence of injury

# EVIDENCE OF INJURY

- External injuries consist of mid-sternal contusion and internal examination reveals fractures
  of lateral right ribs 2-7 and lateral left ribs 2-6 (injuries consistent with cardiopulmonary
  resuscitation)
- Two contusions on the posterior right calf and ankle, 2 ½ x 1 and 3 x 1-inches, respectively

MUTLIB	(b)(6)

# INTERNAL EXAMINATION

HEAD: The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. Clear cerebrospinal fluid surrounds the 1340 gm brain, which has unremarkable gyri and sulci. Coronal sections demonstrate sharp demarcation between white and grey matter, without hemorrhage or contusive injury. The ventricles are of normal size. The basal ganglia, cerebellum, and arterial systems are free of injury or other abnormalities. Examination of the mid-section of the pons on the left side shows a 0.5cm area of apparent hemorrhage. There are no skull fractures. The atlanto-occipital joint is stable.

<u>NECK</u>: The anterior strap muscles of the neck are homogenous and red-brown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa. The thyroid is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries.

Incision and dissection of the posterior neck demonstrates no deep paracervical muscular injury and no cervical spine fractures.

<u>BODY CAVITIES</u>: Contusion of the sternum and rib fractures have been described. Otherwise, the ribs, sternum, and vertebral bodies are visibly and palpably intact. No excess fluid is in the pleural, pericardial or peritoneal cavities. The organs occupy their usual anatomic positions.

RESPIRATORY SYSTEM: The right and left lungs are markedly edematous and weigh 1100 and 1120 gm, respectively. The external surfaces are smooth and deep red-purple with marked anthracotic pigment deposition on the pleura and in the parenchyma. The pulmonary parenchyma is diffusely congested and edematous and displays emphysematous changes at the upper lobes.. No mass lesions or areas of consolidation are present.

CARDIOVASCULAR SYSTEM: The enlarged 710 gm heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. The coronary arteries are present in a normal distribution, with a right-dominant pattern. Cross sections of the vessels show 60% stenosis of the left main coronary artery; 95% multi-focal stenosis of the left anterior descending coronary artery and 95% stenosis of the right coronary artery. The myocardium is homogenous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 2.5 and 1.0 cm thick, respectively. The endocardium is smooth and glistening. A 2 cm area of apparent fibrosis on the postero-lateral left ventricle is grossly consistent with remote myocardial infarction. The aorta shows marked erosive atherosclerosis along the entire length. The renal and mesenteric vessels are calcific with marked atherosclerosis.

<u>LIVER & BILIARY SYSTEM</u>: The 1970 gm liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains 25 ml of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

<u>SPLEEN</u>: The 190 gm spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested, with distinct Malpighian corpuscles.

<u>PANCREAS</u>: The pancreas is mildly autolytic but otherwise firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

ADRENALS: The right and left adrenal glands are symmetric, with yellow cortices and grey medullae. No masses or areas of hemorrhage are identified.

GENITOURINARY SYSTEM: The right and left kidneys are reduced in size and weigh 90 and 80 gm, respectively. The external surfaces are coarsely granular. The cut surfaces are red-tan and the corticomedullary junctions are poorly differentiated. The pelves are unremarkable and the ureters are normal in course and caliber. White bladder mucosa overlies an intact bladder wall. The bladder is empty. The prostate is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

GASTROINTESTINAL TRACT: The esophagus is intact and lined by smooth, gray-white mucosa. The stomach contains approximately 350 ml of brown fluid. The gastric wall is intact. The entire small and large intestines are examined along their entire length and the mucosa is unremarkable. The appendix is present.

<u>MUSCULOSKELETAL</u>: No evidence of chronic disease; incision of the soft tissues of the back, buttocks, thighs, legs and wrists show no evidence of injury.

## MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin and the following histologic slides are made:

- #1, #2, and #4: Histologic sections of the coronary arteries confirm the gross descriptions
- #3 and #5: Left Ventricle: multifocal fibrosis
- #6. Cardiac septum: multifocal fibrosis
  - Right Ventricle: unremarkable
- #7 and #8: Lung: bronchopneumonia; pulmonary edema; emphysematous change
- #9: Liver: no pathologic diagnosis
- #10: Kidney: hyaline arteriolosclerosis; diffuse fibrinoid necrosis of arterioles and hyperplasic arterolitis (onion-skin change); tubular atrophy, interstitial fibrosis and chronic inflammation; focal glomerular fibrosis
- #11: Pons: arteriovenous malformation
  - Medulla: no pathologic diagnosis
- #12: Cortex, brain: no pathologic diagnosis
- #13: Aorta; marked calcific erosive atherosclerosis confirming the gross observations
- #14: Left Ventricle (posterolateral): remote myocardial infarction

b)(6)

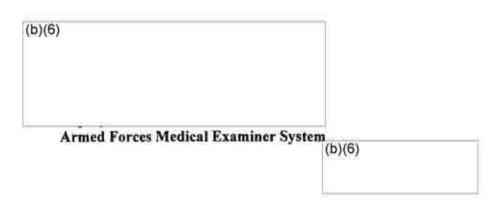
# ADDITIONAL PROCEDURES

- Documentary photographs are taken by the OAFME Photographer
- Identifying marks include a scars on the posterior right leg (calf)
- Specimens retained for toxicological testing and/or DNA identification are: vitreous fluid, blood, urine, spleen, liver, kidney, lung, brain, bile, gastric contents, psoas muscle and adipose tissue
- The dissected organs are forwarded with the body

# OPINION

Based on these autopsy findings and the investigative information available to me, the cause of death of Iraqi detainee (b)(6) is severe three vessel atherosclerotic cardiovascular disease. The markedly enlarged heart shows histologic evidence of previous myocardial infarction (heart attack) and left ventricular hypertrophy. The left ventricle of the heart and the kidneys show both gross and microscopic changes consistent with long standing hypertension (high blood pressure). An incidental arteriovenous malformation of the brain (likely congenital), located in the pons, had no bearing on the cause of death. Toxicology examination is positive for acetaminophen and lidocaine, medications utilized in hospitalized care.

The manner of death is natural.



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# ARMED FORCES INSTITUTE OF PATHOLOGY

# Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 (301) 319-0000



#### AUTOPSY EXAMINATION REPORT

Name: Atiah. Khalifah Hamadi ISN: (b)(6)

Date of Birth: (b)(6) 1959 Date of Death (b)(6) 2006

Date/Time of Autopsy: 06 DEC 2006/1100

Date of Report: 09 FEB 2006

Autopsy No.: (b)(6) AFIP No.: (b)(6)

Rank: Detainee Place of Death: Iraq

Place of Autopsy: Port Mortuary

Dover AFB, Dover, DE

Circumstances of Death: This 57-year-old, detained was interned at Camp Remembrance, Iraq during Operation Iraqi Freedom. Investigative reports state that (b)(6) (b)(6) was admitted to the 21<sup>st</sup> Combat Support Hospital (CSH) with complaints of chest pain and was diagnosed with an acute myocardial infarction. On (b)(6) (b)(6) (condition worsened and he became unresponsive. Aggressive attempts at resuscitation were unsuccessful.

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

**Identification:** Presumptive identification by accompanying reports. A DNA sample is taken for profile purposes should an exemplar becomes available for positive identification.

CAUSE OF DEATH: Acute myocardial infarction

MANNER OF DEATH: Natural

# AUTOPSY REPORT (b)(6) ATIAH, Khalifah Hamadi

#### FINAL AUTOPSY DIAGNOSES:

# Natural disease diagnoses

- A. Atherosclerotic cardiovascular disease
  - 1. Acute thrombus middle circumflex coronary artery
  - 2. Luminal narrowing, 70% of the left main coronary artery
  - Luminal narrowing; 80% of the proximal, 90% of the middle and 90% of the distal left anterior descending coronary artery
  - Luminal narrowing; 60% of the proximal, 90% of the middle and near total occlusion (pinpoint lumen) of the distal right coronary arteries
  - Diffuse arteriosclerotic and atherosclerotic plaque formation throughout the thoracic and abdominal aorta
  - 6. Calcific plaque formation and luminal narrowing of both renal arteries
  - 7. Acute and healed myocardial infarction involving the left ventricle
  - Cardiomegaly (borderline); 450-grams (expected heart weight 344-grams, upper limit 439-grams)
- B. Bilateral atrophied and granular kidneys (right 70-grams, left 30-grams)
- C. Bilateral pulmonary edema (right lung 640-grams, left lung 670-grams)

#### II. Evidence of medical intervention

- A. Orotracheal tube, appropriately placed
- B. Angiocatheter sutured in the left subclavian vein
- C. Multiple (14) self-adhesive electrocardiogram electrodes affixed to the anterior chest, left arm and left thigh
- D. Urinary catheter
- E. Intravenous catheters in the dorsum of both distal forearms
- F. Multiple therapeutic puncture marks on the left neck and shoulder, right antecubital fossa, and right lower quadrant of the abdomen
- G. Identification bracelet on the right wrist printed with (b)(6)
- H. Hemorrhage into the superficial strap muscles and left lobe of the thyroid gland

#### III. Traumatic diagnoses

- A. Trauma of the head and neck
  - No evidence of ligature marks or strangulation on the neck after external examination and layerwise anterior and posterior neck dissections
- B. Trauma of the torso
  - Faint red contusion on the lower chest along the right anterior axillary line, 1 ½
    x ½-inch
  - Healing contusion on the lower chest along the left mid-clavicular line, 1 x ¼inch
  - Area of ecchymosis above the left anterior superior iliac spine associated with a therapeutic puncture, 2 1/8 x ¾-inches
  - 4. Contusion below the angle of the left scapula, 1 x 1/2-inches
  - Superficial hemorrhage into the left middle trapezius and rhomboid muscles. 4
     1/2 x 1 ½-inches, without injury to the underlying paraspinal muscles

# AUTOPSY REPORT (b)(6) ATIAH, Khalifah Hamadi

 No evidence of additional trauma after external examination and dissection of the subcutaneous tissues and muscles

#### C. Trauma of the extremities

- Contusion of the right antecubital fossa associated with therapeutic punctures, 2
   x 1 ¼-inches
- Contusion on the tip of the distal phalanx of the 1<sup>st</sup> digit of the right foot, 1/8inch
- 3. Ecchymosis in the right popliteal fossa, 3 x 2 1/2-inches
- No evidence of additional trauma after external examination and dissection of the subcutaneous tissues and muscles

#### IV. Post-mortem changes

- A. Lividity is fixed on the posterior surface of the body except in areas exposed to pressure
- B. Rigor is present to an equal degree in all extremities
- C. Greenish discoloration of the skin of the right lower quadrant of the abdomen

#### V. Toxicology results

- A. Volatiles: The blood and vitreous fluid were examined for the presence of ethanol at a cutoff of 20 mg/dl. No ethanol was detected.
- B. Drugs: The blood 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:
  - Positive metoprolol: Metoprolol was detected in the blood by gas chromatography and confirmed by gas chromatography/mass spectrometry. The blood contained ½ mg/L of metoprolol as quantitated by gas chromatography/mass spectrometry.
- C. Carbon Monoxide: The Carboxyhemoglobin saturation in the blood is less than 1% as determined by spectrophotometry with a limit of quantitation of 1%. Carboxyhemoglobin saturations of 0-3% are expected for non-smokers and 3-10% for smokers. Saturations above 10% are considered elevated and are confirmed by gas chromatography.
- D. Cyanide: No cyanide is detected in the blood. The limit of quantitation for cyanide is 0.25 mg/L. Normal blood cyanide concentrations are less than 0.15mg/L. Lethal concentrations of cyanide are greater than 3 mg/L.

# EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished appearing adult male whose appearance is consistent with the reported age of 57-years. The remains are 69-inches in length, and weigh 182-pounds. Lividity is present and fixed on the posterior surface of the body, except in areas exposed to pressure. Rigor is present to an equal degree in all extremities. The temperature of the body is that of the refrigeration unit.

The scalp is covered with curly short black hair with gray at the temples and early male pattern baldness. The face has grey and brown stubble with a trim grey streaked black moustache. The irides are brown, the comeae hazy, and the pupils are round and equal in diameter. The sclera are white, the conjunctivae congested with no evidence of petechial hemorrhage. The external auditory canals are free of foreign material and abnormal secretions. The ears are unremarkable. The nares are patent and the lips are atraumatic. The nose and maxillae are palpably stable. The teeth appear natural and in poor condition. No evidence of trauma is noted on the head.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. The abdomen is flat. The genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. Pubic hair is present in a normal male distribution. The buttocks and anus are unremarkable. No evidence of significant trauma is noted on the torso.

The upper and lower extremities are symmetric, without clubbing or edema. No evidence of significant trauma is noted on the extremities.

Identifying marks include the following:

- Multiple hypopigmented scars on the anterior left leg, up to ½-inch in greatest dimensions
- An obliquely oriented (along the 5 to 11 o'clock axis) elliptical scar on the interscapular skin of the back, 2 ½ x ½-inches
- A hyperpigmented scar on the medial border of the right scapula, ¾ x ½-inch
- A hypopigmented scar below the right gluteal crease, 2 x ½-inches
- Hyperkeratotic patch on the right lateral malleolus, 7/8 x ½-inches

#### CLOTHING AND PERSONAL EFFECTS

The following clothing items and personal effects accompanied the body to the mortuary at the time of autopsy:

- One pair yellow pajamas
- A light green quilted jacket
- A white short sleeve cotton tee shirt
- A pair of brown socks
- A knit ski cap
- Pair of brown shower shoes
- A single knit black glove

### MEDICAL INTERVENTION

- Orotracheal tube, appropriately placed
- Angiocatheter sutured in the left subclavian vein
- Multiple (14) self-adhesive electrocardiogram electrodes affixed to the anterior chest, left arm and left thigh
- Urinary catheter
- Intravenous catheters in the dorsum of both distal forearms
- Multiple therapeutic puncture marks on the left neck and shoulder, right antecubital fossa, and right lower quadrant of the abdomen
- Identification bracelet on the right wrist printed with (b)(6)
- · Hemorrhage into the superficial strap muscles and left lobe of the thyroid gland

#### RADIOGRAPHS

A complete set of postmortem radiographs is obtained and demonstrate no evidence of significant trauma

#### EVIDENCE OF INJURY

The ordering of the following injuries is for descriptive purposes only, and is not intended to imply order of infliction or relative severity.

There is a faint red contusion on the lower chest along the right anterior axillary line measuring 1 ½ x ½-inch. On the lower chest along the left mid-clavicular line is a healing 1 x ¾-inch contusion. There is an area of ecchymosis measuring 2 1/8 x ¾-inches above the left anterior superior iliac spine associated with a therapeutic puncture. Injuries to the back include a superficial hemorrhage into the left middle trapezius and rhomboid muscles measuring 4 ½ x 1 ½-inchew without injury to the underlying paraspinal muscles.

Injuries to the extremities include a contusion, measuring 2 ½ x 1 ¼-inches, in the right antecubital fossa associated with therapeutic punctures. There is a contusion on the tip of the distal phalanx of the 1<sup>st</sup> digit of the right foot measuring 1/8-inch in diameter. In the right popliteal fossa is a 3 x 2 ½-inch area of ecchymosis.

#### INTERNAL EXAMINATION

#### HEAD:

The galeal and subgaleal soft tissues of the scalp are free of injury. The scalp is reflected. The calvarium is intact as is the dura mater beneath it. There are no epidural or subdural hemorrhages present. The leptomeninges are thin and delicate. Clear cerebrospinal fluid surrounds the 1280-gram brain, which has unremarkable gyri and sulci. The cerebral hemispheres are symmetrical and demonstrate mild vascular congestion. The structures at the base of the brain, including cranial nerves and blood vessels are intact. Coronal sections demonstrate sharp demarcation between white and grey matter, without hemorrhage or contusive injury. The ventricles are of normal size. The basal ganglia, brainstem, and cerebellum are free of injury or other abnormalities. The arterial systems

# AUTOPSY REPORT (b)(6) ATIAH, Khalifah Hamadi

are free of injury. Focal atherosclerotic plaques are noted in the basilar and vertebral arteries. The atlanto-occipital joint is stable.

#### NECK:

The anterior strap muscles of the neck are homogenous and red-brown. Focal hemorrhage is noted in the superficial left strap muscles and the left lobe of the thyroid gland and described under "Evidence of Medical Intervention". The thyroid cartilage and hyoid are intact. The larynx is lined by intact white mucosa. The thyroid is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries. Incision and layerwise dissection of the anterior and posterior neck demonstrates no evidence of trauma, deep paracervical muscular injury, or cervical spine fractures.

#### BODY CAVITIES:

The body is opened by the usual thoraco-abdominal incision and the chest plate is removed. No adhesions are present in any of the body cavities. There is a 30-milliliter collection of serosanguinous fluid in the right pleural cavity. The remaining body cavities have no abnormal collections of fluid. All body organs are present in the normal anatomic position. There is no internal evidence of blunt force or penetrating injury to the thoraco-abdominal region.

#### RESPIRATORY SYSTEM:

The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth, yellow-tan and unremarkable. The pleural surfaces are smooth, glistening and unremarkable bilaterally. The external surfaces are smooth and dark red. The pulmonary parenchyma is diffusely congested, boggy red, and edematous, exuding moderate amounts of bloody fluid. No mass lesions or areas of consolidation are present. The right and left lungs weigh 640 and 670-grams, respectively.

## CARDIOVASCULAR SYSTEM:

The pericardial surfaces are smooth, glistening and unremarkable; the pericardial sac is free of significant fluid or adhesions. The coronary arteries arise normally; follow the usual distribution in a right dominant pattern. Three vessel atherosclerotic coronary artery disease is present with luminal narrowing in the following distribution: left main coronary artery - 70%; left anterior descending coronary artery - proximal (80%), middle (90%), and distal (90%); right coronary artery - proximal (60%), middle (90%), and distal (near occlusion - pinpoint lumen); left circumflex coronary artery (90%) with acute thrombus formation in the middle segment of the vessel. Scarring and fibrosis is noted in the septum and posterior free wall of the left ventricle. The remainder of the myocardium is homogenous, red-brown, firm and unremarkable. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 1.2 and 0.3-centimeters thick, respectively. The endocardium is smooth and glistening. The aorta and its major branches arise normally, follow the usual course and are widely patent. There are multiple calcific atherosclerotic plaques along the thoracic and abdominal aorta. There is calcific plaque formation and near occlusive luminal narrowing of both renal arteries. The venae cavae and its major tributaries return to the heart in the usual distribution and

# AUTOPSY REPORT (b)(6) ATIAH, Khalifah Hamadi

are free of thrombi. The mesenteric vessels are unremarkable. The heart weighs 450grams (predicted heart weight 205-439-grams for a 181-pound man).

# LIVER & BILIARY SYSTEM:

The hepatic capsule is smooth, glistening and intact, covering dark red-brown, moderately congested parenchyma with no focal lesions present. The gallbladder contains 50-milliliters of green-brown, bile; the mucosa was velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi. The liver weighs 1960-grams.

### SPLEEN:

The 300-gram spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested, with distinct Malpighian corpuscles.

#### PANCREAS:

The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

### ADRENALS:

The right and left adrenal glands are symmetric, with bright yellow cortices and grey medullae. No masses or areas of hemorrhage are identified.

#### GENITOURINARY SYSTEM:

The right and left kidneys weigh 70 and 30-grams, respectively. The external surfaces are intact and granular. The cut surfaces are red-tan and congested, with uniformly thick cortices and blurring of the corticomedulary junctions. The pelves are unremarkable and the ureters are normal in course and caliber. White bladder mucosa overlies an intact bladder wall. The bladder contains no urine. The prostate is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

#### GASTROINTESTINAL TRACT:

The esophagus is intact and lined by smooth, grey-white mucosa. There is a 3 x 2 ½-inch area of hemorrhage of the mucosal surface in the fundus of the stomach. The stomach contains approximately 250-milliliters of thick brown fluid with fragments of partially digested food. The duodenum, loops of small bowel, and colon are unremarkable. The appendix is present.

#### MUSCULO-SKELETAL SYSTEM:

Muscle development is normal. No bone or joint abnormalities or injuries are noted.

#### ADDITIONAL PROCEDURES

- Documentary photographs are taken by OAFME staff photographers
- Specimens retained for toxicologic testing and/or DNA identification are: heart blood, vitreous fluid, gastric contents, bile, spleen, liver, lung, kidney, brain, adipose tissue, and psoas muscle
- · Full body radiographs are obtained and demonstrate the above findings
- Selected portions of organs are retained in formalin, histological slides are prepared of selected organs
- · The dissected organs are forwarded with the body
- Personal effects are released to the mortuary affairs representatives

## MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin.

#### SLIDE SUMMARY:

1. Left anterior descending coronary	7. Left ventricle
artery	8. Anterior left ventricle
2. Right coronary artery	<ol><li>Lateral left ventricle</li></ol>
3. Circumflex coronary artery	<ol><li>Kidney, lung</li></ol>
4. Circumflex coronary artery with	11. Spleen, lung
thrombus	12. Liver, lung
5. Right ventricle	13. Kidney, lung
6. Septum	14. Aorta, lung

- I. Cardiovascular (#1-9, 14): Histologic sections of the left anterior descending and right coronary arteries demonstrate at least 90% luminal narrowing by fibrocalcific plaques. Sections of the left circumflex coronary artery show acute rupture of a fibroatheroma with occlusive thrombus and greater then 90% luminal narrowing. Focal myocyte hypertrophy is seen in microscopic sections of the right ventricle and septum. Histologic sections of the left ventricle show the presence of contraction bands, a neutrophilic infiltrate, transmural replacement fibrosis, interstitial fibrosis, and focal myocyte hypertrophy. Fibrocalcific plaques are seen on microscopic evaluation of representative sections of the aorta.
- II. Pulmonary (#10-14): Vascular congestion, no significant pathologic diagnosis
- III. Liver (#12): Vascular congestion, no significant pathologic diagnosis
- IV. Genitourinary (#10, 13): Kidneys demonstrate arteriosclerosis, focal glomerular sclerosis and focal tubular necrosis
- V. Spleen (#11): Vascular congestion, no significant pathologic diagnosis

# **OPINION**

This	57-year-old detainee (b)(6)	died	of an Acute Myocardial
Infare Micro heale right exam (182- injuri carbo detect unrela	ction. An acute thrombus was idescopic and gross examination of infarct. Severe coronary ather and left circumflex coronary arterination. His heart weighed 450-pounds) is 344-grams with an upes were identified at autopsy. T	lentified in the left of f the heart demonst osclerosis of three eries) was noted bo- grams and the expe- oper limit of 439-gr oxicology tests for gative. Supratheran- re significantly belo	circumflex coronary artery. rated evidence of an acute and vessels (left anterior descending, th on gross and microscopic ected heart weight for his size rams. No significant traumatic ethanol, screened drugs of abuse, peutic levels of metoprolol were
(b)(6)		(b)(6)	
(b)(6)	Medical Examiner	(b)(6)	Medical Examiner

			FICATE OF DEATH					
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# ARMED FORCES INSTITUTE OF PATHOLOGY

# Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 1-301-319-0000



#### AUTOPSY EXAMINATION REPORT

Name: BTB Muhammad Hamad, Bnayyan Autopsy No.: (b)(6) Internment Serial No. (b)(6) Date of Birth: (b)(6) 1931

Date of Death (b)(6) 2006 Date/Time of Autopsy: 04 DEC 2006

@ 1200 hrs

Date of Report: 17 JAN 2007

AFIP No.: (b)(6)

Rank: Detainee Place of Death: Iraq

Place of Autopsy: Port Mortuary, Dover

AFB, DE

Circumstances of Death: This 75 year-old elderly male civilian detainee suffered a prolonged hospitalization due to pneumonia and eventual septic and cardiogenic shock which progressed to multi-organ system failure. The ethics committee of the Camp Cropper TIF Hospital determined that continuation of treatment was not warranted due to futility. Accordingly, cardiac support (vasopressors) was withdrawn and the detainee expired.

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

Identification: Presumptive identification based on accompanying paperwork

CAUSE OF DEATH: Acute and Organizing Diffuse Alveolar Damage

MANNER OF DEATH: Natural

# FINAL AUTOPSY DIAGNOSIS

- I. Pulmonary System:
  - Acute and Organizing Diffuse Alveolar Damage (Lung Weights Right 1880-grams; Left 1750-grams)
  - B. Silico-anthracotic Nodules
  - C. Bilateral Pleural Adhesions
  - D. Bilateral Serous Pleural Effusions (Left 100-milliliters; Right 100-milliliters)
- II. Cardiovascular System:
  - A. Heart Weight 460-grams
  - B. Serous Pericardial Effusion (50-milliliters)
  - C. Mild Atherosclerosis of the Aorta
  - D. Chronic Inflammation of the Epicardium
- III. Hepatobilliary System:
  - A. Passive Congestion (Liver Weight 1950-grams)
  - B. Adhesions Between the Liver and Both Hemidiaphragms
  - C. Mild Portal Triaditis and Fibrosis
- IV. Reticuloendothelial System:
  - A. Congestion of the Spleen (Spleen Weight 250-grams)
  - B. Adhesions Between the Spleen and Multiple Loops of Bowel
- V. Gastrointestinal System: Abdominal Adhesions
- VI. Genitourinary System:
  - A. Simple Cortical Cysts of Both Kidneys
  - B. Mild Chronic Pyelonephritis
  - C. Benign Nephrosclerosis (hyaline arteriolosclerosis)
- VII. Other Findings:
  - A. Anasarca
    - i. 250-milliters of ascites
  - B. Multiple Decubitus Ulcers:
    - i. Right Forearm, 1/2-inch
    - Right Buttock (4), Ranging From ¼-inch to 1-inch in Greatest Dimension
    - iii. Left Buttock (2), 2-inch and 2 3/4-inch
    - iv. Left Posterior Thigh (2), 1/2-inch and 1/2-inch
    - v. Right Knee (2), 1-inch and 1 1/2-inch
    - vi. Left Knee, 1-inch
    - vii. Right Leg, 1/2-inch
    - viii. Right Lateral Malleolus, 1/2-inch
    - ix. Left Lateral Malleolus, 1/2-inch
  - C. Blister of the Right Heel
  - D. Skin Tag: Right Shoulder
  - E. Multiple Brown and White Macules on the Torso and Extremities
  - F. Drying and Cracking of the Lips
  - G. Drying and Cracking of the Plantar Surfaces of Both Feet
- VIII. Evidence of Significant Injury: None
- IX. Evidence of Medical Intervention:

# AUTOPSY REPORT (b)(6)

# BTB Muhammad Hamad, Bnayyan

- A. Tracheostomy
- B. EKG Leads on the Anterior Torso
- C. Right Chest Tube
- D. Percutaneous Endoscopic Gastrostomy
- E. Stapled Vertical Incision of the Abdomen, 7-inches
- F. Dressings:
  - i. Buttocks (3)
  - ii. Right Knee
  - iii. Abdomen
  - iv. Chest
  - v. Neck
- G. Foley Catheter
- H. Arterial Line, Right Wrist
- I. Intravenous Access, Right Subclavian
- J. Multiple Needle Punctures:
  - i. Left Subclavian (4)
  - ii. Left Wrist (1)
- X. Post-mortem Changes:
  - A. Lividity is fixed on the posterior surface of the body except in areas exposed to pressure
  - B. Rigor has passed
  - C. Skin slippage
- XI. Toxicology (AFIP):
  - A. CARBON MONOXIDE: The carboxyhemoglobin saturation in the
  - B. CYANIDE: No cyanide is detected in the blood
  - C. VOLATILES: No ethanol is detected in the blood and vitreous fluid
  - D. DRUGS: No screened drugs of abuse or medications are detected in the blood

## EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished appearing 68 ½-inch tall, 198pounds male whose appearance is consistent with the reported age of 75-years. There is generalized edema of the torso and extremities. Lividity is fixed on the posterior surface of the body except in areas exposed to pressure. Rigor has passed. The body is cold to the touch. The body is lying on blue hospital chucks.

There is a male pattern baldness hair distribution. The irides are bown, and the pupils are round and equal in diameter. The external auditory canals and ears are unremarkable. The nares are patent and the lips are atraumatic. The nose and maxillae are palpably stable. The teeth appear natural with excess wear. The dentition is poor. The face is edematous. The lips are dry and cracked.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. The abdomen is protuberant. There is a ½-inch round scar on the lower abdomen. The genitalia are those of an adult male. The penis and scrotum are edematous. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The anus is unremarkable.

Multiple decubitus ulcers are observed on the: right forearm, ½-inch; right buttock (4), ranging from ¼-inch to 1-inch in greatest dimension; left buttock (2), 2-inch and 2 ¾-inch; left posterior thigh (2), ¼-inch and ½-inch; right knee (2), 1-inch and 1 ½-inch; left knee, 1-inch; right leg, ½-inch; right lateral malleolus, ¼-inch; and left lateral malleolus, ½-inch. One of the decubitus ulcers on the left buttock extends into the underlying muscle. There is a blister on the right heel, a skin tag on the right shoulder and multiple tan and white macules on the extremities and torso.

The upper and lower extremities are symmetric. The plantar surfaces of both feet are dry and cracked. (b)(6)

# CLOTHING AND PERSONAL EFFECTS

The following clothing items and personal effects are present on the body at the time of autopsy: The body is received unclad. There is a green personal effects bag tied to the left wrist. The contents of the bag are documented photographically. The bag contains foreign and United States currency, personal papers, two photos and an identification bracelet

#### MEDICAL INTERVENTION

The following medical interventions are present on the body at the time of autopsy:

- Tracheostomy
- EKG Leads on the Anterior Torso
- · Right Chest Tube
- Percutaneous Endoscopic Gastrostomy
- Stapled Vertical Incision of the Abdomen, 7-inches

- Dressings:
  - Buttocks (3)
  - Right Knee
  - Abdomen
  - Chest
  - Neck
- Foley Catheter
- Arterial Line, Right Wrist
- · Intravenous Access, Right Subclavian
- Multiple Needle Punctures:
  - Left Subclavian (4)
  - Left Wrist (1)

#### RADIOGRAPHS

A complete set of postmortem radiographs and computerized tomography scans are obtained and demonstrates the following:

- · Consolidation of both lungs
- Pericardial effusion
- Contrast in the distal colon.
- No blunt force or penetrating injuries are detected radiographically

# EVIDENCE OF INJURY

There is no evidence of any significant injury.

# INTERNAL EXAMINATION

#### HEAD:

The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. Clear cerebrospinal fluid surrounds the 1440-gram brain, which has unremarkable gyri and sulci. Coronal sections demonstrate sharp demarcation between white and grey matter, without hemorrhage or contusive injury. The ventricles are of normal size. The basal ganglia, brainstem, cerebellum, and arterial systems are free of injury or other abnormalities. There are no skull fractures. The atlanto-occipital joint is stable.

#### NECK

The anterior strap muscles of the neck are homogenous and red-brown, without hemorrhage. The thyroid cartilage and hyoid are intact. The larynx is lined by intact white mucosa. The thyroid is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries.

#### BODY CAVITIES:

The ribs, sternum, and vertebral bodies are visibly and palpably intact. There is 100-millilters of serous fluid in both chest cavities, 50-milliliters of serous fluid in the pericardium and 250-milliliters of serous fluid in the peritoneum. The organs occupy their usual anatomic positions.

#### RESPIRATORY SYSTEM:

The right and left lungs weigh 1880 and 1750-grams, respectively. There are dense adhesions between both lungs and the pleura and both hemidiaphragms. The external surfaces are rough, irregular and tan-brown. The pulmonary parenchyma is diffusely congested, edematous and firm. There are multiple areas of tan consolidation present in both lungs.

#### CARDIOVASCULAR SYSTEM:

The 460-gram heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. The coronary arteries are present in a normal distribution, with a right-dominant pattern. Cross sections of the vessels show wide patency. The myocardium is homogenous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 1.1 and 0.4-centimeters thick, respectively. The endocardium is smooth and glistening. The aorta gives rise to three intact and patent arch vessels. There is mild atherosclerosis consisting of fatty streaks in the aorta. The renal and mesenteric vessels are unremarkable.

#### LIVER & BILIARY SYSTEM:

The 1950-gram liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. The cut surface has a "nutmeg" appearance. No mass lesions or other abnormalities are seen. The gallbladder contains a 20-milliters of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent. There are adhesions between the liver and both hemidiaphragms.

#### SPLEEN:

The 250-gram spleen has a smooth (in areas not involved by adhesions), intact, redpurple capsule. There are adhesions between the spleen and multiple loops of small bowel. The parenchyma is maroon and congested, with distinct Malpighian corpuscles.

#### PANCREAS:

The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

## ADRENALS:

The right and left adrenal glands are symmetric, with bright yellow cortices and grey medullae. There is significant autolysis seen. No masses or areas of hemorrhage are identified.

#### GENITOURINARY SYSTEM:

The right and left kidneys each weigh 220-grams. The external surfaces are intact and granular. The cut surfaces are red-tan and congested, with uniformly thick cortices and sharp corticomedullary junctions. There are multiple smooth walled cortical cysts identified in both kidneys. The largest cyst measures 1 ½-centimeters in diameter. The pelves are unremarkable and the ureters are normal in course and caliber. The bladder

mucosa overlies an intact bladder wall and is focally hyperemic. The bladder contains approximately 5-milliliters of clear yellow urine. The prostate is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

#### GASTROINTESTINAL TRACT:

The esophagus is intact and lined by smooth, grey-white mucosa. The stomach is empty and there is very mild erythema of the mucosal surface. The gastric wall is intact. The duodenum, loops of small bowel, and colon are unremarkable. There are multiple adhesions between the small bowel, colon and spleen. The appendix is present.

### PULMONARY PATHOLOGY CONSULTATION (AFIP)

08 JAN 2007

- -Acute organizing diffuse alveolar dmage
- -Silico-anthracotic nodules

Lungs show mostly organizing diffuse alveolar damage with focal acute areas (hyaline membranes). As is typical of patients on a respirator, there is focal acute inflammation. No organisms are seen on GMS. Stains for CMV, adenovirus and herpes virus are negative.

## MICROSCOPIC EXAMINATION

- Lung (Slides 1 through 5) See pulmonary pathology consultation.
- Kidney (Slide 6) There is a simple cortical cyst and mild chronic interstitial
  inflammation with occasional sclerotic glomeruli. A rare interstitial eosinophil is
  seen. Some of the tubules are distended and have atrophic epithelium and contain a
  pink granular material (mild "thyroidization"). There is a mild narrowing of the
  lumens of arterioles caused by thickening and hyalinization of their walls.
- Liver (Slide 7) There is congestion of the centrilobular sinusoids and peri-portal and portal chronic inflammation. Occasional acute inflammatory cells are seen. Mild fibrosis is seen.
- Spleen (Slide 8) The spleen is congested and otherwise unremarkable.
- · Brain (Slide 9) There are no significant pathologic findings.
- · Bladder/Prostate (Slide 10) There are no significant pathologic findings
- Heart (Slides 11 through 13) There are chronic inflammatory cells seen in the epicardial fat. Otherwise there are no significant pathologic findings.

### ADDITIONAL PROCEDURES

- Documentary photographs are taken by OAFME staff photographers.
- Full body radiographs are obtained and demonstrate no significant blunt force or penetrating trauma.
- Specimens retained for toxicology testing and/or DNA identification are: Blood, vitreous fluid, bile, urine, brain, lung, liver, spleen, kidney, adipose tissue and psoas muscle
- 4. The dissected organs are forwarded with the body.
- Selected portions of organs are retained in formalin. Histologic slides are prepared on: Lung, kidney, liver, spleen, brain, bladder and heart.
- Personal effects are released to the appropriate mortuary operations representatives.
- Identifying marks include: A tattoo on (b)(6)

### OPINION

This 75 year-old male, BTB (b)(6)

died of acute and organizing diffuse alveolar damage. The etiology of this condition is most likely the previously clinically diagnosed and treated pneumonia. Complications of these conditions included a clinical history of sepsis, shock and multi-organ system failure. Multiple decubitis ulcers were seen on external examination and are most likely due to prolonged hospitalization with a debilitating illness. The toxicology screen is negative for cyanide, ethanol, and screened drugs of abuse and medications. The carboxyhemoglobin saturation was not elevated. The manner of death is natural.

(b)(6)		
(b)(6)	Medical Examiner	(b)(6)

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REPLACES DA FORM 3668, 1 JAN 72 AND DA FORM 3668-RIPAS), 26 SEP 76, WHICH ARE OBSOLETE.



# ARMED FORCES INSTITUTE OF PATHOLOGY

# Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 (301) 319-0000



# FINAL AUTOPSY REPORT

Name: MUHAISIN, Jamil lraqi National Detainee (b)(6) Date of Birth (b)(6) 1937 Date of Death: (b)(6) 2006 Date of Autopsy: 04 DEC 2006 @ 1230 Date of Report: 16 JAN 2007	Autopsy No: (b)(6)  AFIP No: (b)(6)  Rank: Civilian  Place of Death: Camp Bucca, Iraq  Place of Autopsy: Dover AFB Port Mortuary,  Delaware
detainee in Camp Bucca, Iraq. He reportedly	was a 69 year-old male, Iraqi National, held as a suffered a myocardial infarction on 23 November arrhythmias. Despite advanced care including 2006.
Authorization for Autopsy: Office of the Ar Title 10 US Code, Section 1471 (10 USC 147	rmed Forces Medical Examiner, in accordance with  1)
Identification: Identification established by	investigative agency

CAUSE OF DEATH: Atherosclerotic Cardiovascular Disease

MANNER OF DEATH: Natural

Muhaisin	(b)(6)
Muhaisin	(p)(o)

#### AUTOPSY DIAGNOSES:

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#### A.Heart:

Cardiomegaly, 540 grams
Calcific stenosis, 60% of the left main coronary artery
Calcific stenosis, 99% of the proximal left anterior descending coronary artery
Stenosis, 80% of the proximal right coronary artery
Acute myocardial infarction, left ventriculo-septum
Severe aortic atherosclerosis with plaque erosions

## B. Lungs:

Marked bilateral pleural and intraparenchymal anthrocotic pigment deposition Marked pulmonary edema (combined lung weight 2000 gm)
Bilateral pulmonary effusions; 500 ml right, 400 left
Acute bronchopulmonary and lobar pneumonia
Emphysema

C. Kidneys: Arteriolonephrosclerosis

D. Thyroid Gland: Follicular adenoma and nodular hyperplasia

E. Prostate Gland: Benign nodular hyperplasia

#### II. No external injuries

III. Evidence of medical treatment includes placement of a nasogastric tube; endotracheal tube intravascular devices in the left side of the neck, both antecubital fossae, left wrist and left groin; needle puncture marks with surrounding ecchymosis on the back of the right hand; cardiac monitor/defibrillator pads on the anterior chest and abdomen; a Foley catheter is in the penis

#### IV. Toxicological examination:

VOLATILES: The blood and vitreous fluid are negative for ethanol at a cutoff level of 20 mg/dL.

CARBON MONOXIDE: The carboxyhemoglobin (COHgb) saturation in the blood is less than 1% as determined by spectrophotometry with a limit of quantitation of 1%. Saturations above 10% are considered elevated and are confirmed by gas chromatography.

CYANIDE: There is no cyanide detected in the blood. The limit of quantitation for cyanide is 0.25 mg/L. Normal blood cyanide concentrations are less than 0.15 mg/L. Lethal concentrations of cyanide are greater than 3 mg/L.

DRUGS: The blood is 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 are detected:

- Benzodiazepine, Midazolam, is detected in the blood by immunoassay and confirmed by gas chromatography/mass spectrometry. The blood contains 0.08 mg/L of Midazolam as quantitated by gas chromatography/mass spectrometry.
- O Benzodiazepine, Alphahydroxymidazolam (a metabolite of Midazolam), is detected in the blood by gas chromatography and confirmed by gas chromatography/mass spectrometry. The blood contains 0.03 mg/L of Alphahydroxymidazolam as quantitated by gas chromatography/mass spectrometry.
- Benzodiazepine, (Lorazepam), is detected in the blood by gas chromatography/mass spectrometry. The blood contains 0.033 mg/L of Lorazepam as quantitated by gas chromatography/mass spectrometry.
- Lidocaine is detected in the blood by immunoassay and confirmed by gas chromatography/mass spectrometry.

#### EXTERNAL EXAMINATION

The body is that of a well-developed 67-inch tall, 164 pound Caucasian male whose appearance is consistent with the reported age of 69-years. Lividity is fixed on the posterior aspect of the body and rigor has passed. The temperature is cold, that of the refrigeration unit.

The scalp is covered with brown hair with frontal balding and temporal greying. Facial hair consists of a brown mustache. The irides are brown and the pupils are round and equal in diameter. The external auditory canals are free of foreign material. The ears are unremarkable. The nares are patent and the lips are atraumatic. The nose and maxillae are palpably stable. The teeth are natural.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. The abdomen is moderately protuberant. The genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The buttocks and anus are unremarkable.

The upper and lower extremities are symmetric and without clubbing or edema.

#### CLOTHING AND PERSONAL EFFECTS

The deceased is unclad and personal effects are not present on the body at the time of autopsy.

Muhaisin	(b)(6)
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# MEDICAL INTERVENTION

Evidence of medical treatment includes placement of a nasogastric tube and endotracheal tube; intravascular devices in the left side of the neck, both antecubital fossae, left wrist and left groin; needle puncture marks with surrounding ecchymosis are on the back of the right hand; cardiac monitor/defibrillator pads on the anterior chest and abdomen; a Foley catheter is in the penis

#### RADIOGRAPHS

A complete set of postmortem radiographs is obtained and shows no acute injuries or abnormalities.

## EVIDENCE OF INJURY

There are no external injuries.

#### INTERNAL EXAMINATION

<u>HEAD</u>: The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. Clear cerebrospinal fluid surrounds the 1320 gm brain, which has unremarkable gyri and sulci. Coronal sections demonstrate sharp demarcation between white and grey matter, without hemorrhage or contusive injury. The ventricles are of normal size. The basal ganglia, brainstem, cerebellum, and arterial systems are free of injury or other abnormalities. There are no skull fractures. The atlanto-occipital joint is stable.

<u>NECK</u>: The anterior strap muscles of the neck are homogenous and red-brown, without hemorrhage. The thyroid cartilage and hyoid are intact. The larynx is lined by intact white mucosa.

The thyroid gland is bilaterally enlarged and nodular with cystic changes, greater on the right than left. A well circumscribed 1 cm nodule is on the left lobe and frequent cysts, ranging in size from 1 to 2 cm, are present. The right lobe shows several cysts ranging from 1 to 3 cm in greatest dimension. A poorly defined 2 cm nodule is present and on sectioning contains dark brown fluid.

The tongue is free of bite marks, hemorrhage, or other injuries.

Incision and dissection of the posterior neck demonstrates no deep paracervical muscular injury and no cervical spine fractures. Longitudinal incisions of the back, buttocks, thighs, ankles and wrist show no evidence of injuries.

BODY CAVITIES: The ribs, sternum, and vertebral bodies are visibly and palpably intact. No excess fluid is in the pericardial or peritoneal cavities. The right chest cavity contains 500 ml of serosanguinous fluid and the left contains 400 ml of serosanguinous fluid. The organs occupy their usual anatomic positions.

RESPIRATORY SYSTEM: The right and left lungs are grossly edematous and weigh 1140 and 860 gm, respectively. Bilateral pleural adhesions are easily broken with gentle dissection. The external surfaces are otherwise smooth and deep red-purple with marked deposition of anthracotic pigment on the pleura and within the lung parenchyma. The pulmonary parenchyma is markedly congested and edematous. No mass lesions or areas of consolidation are present.

<u>CARDIOVASCULAR SYSTEM</u>: The 540 gm heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. The coronary arteries are present in a normal distribution, with a right dominant pattern. Cross sections of the vessels show marked atherosclerosis:

- 99% (pinpoint lumen) calcific stenosis of the proximal left anterior descending coronary artery
- 80% calcific stenosis of the proximal to mid right coronary artery
- 60% calcific stenosis of the left coronary artery

The myocardium is homogenous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 1.7 cm and 0.5 cm thick, respectively. The endocardium is smooth and glistening. A definitive area of myo-necrosis is not identified. The aorta shows marked erosive atherosclerosis along the thoracic and abdominal segments.

<u>LIVER & BILIARY SYSTEM</u>: The 1960 gm liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains 35 ml of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

<u>SPLEEN</u>: The 260 gm spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested, with distinct Malpighian corpuscles.

<u>PANCREAS</u>: The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

ADRENALS: The right and left adrenal glands are symmetric, with yellow cortices and grey medullae. No masses or areas of hemorrhage are identified.

GENITOURINARY SYSTEM: The right and left kidneys are nodular; the right kidney weighs 160 gm and the left weighs 140 gm. The external surfaces are rough and granular and the capsules strip with difficulty from the cortical surfaces. The cut surfaces are red-tan and congested and the corticomedullary junctions are poorly demarcated. The pelves are unremarkable and the ureters are normal in course and caliber. White bladder mucosa overlies an intact bladder wall. The bladder is empty. The prostate is moderately enlarged, with lobular, yellow-tan parenchyma. A 1-cm, well circumscribed nodule occupies the right lobe. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

GASTROINTESTINAL TRACT: The esophagus is intact and lined by smooth, grey-white mucosa. The stomach contains approximately 50 ml of dark brown fluid. The gastric wall is intact. The duodenum, loops of small intestine and colon are unremarkable. The appendix is present.

#### MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin with preparation of the following histologic slides:

- Brain: frontal cortex and hippocampus no pathologic abnormality
- 2. Brain: pons no pathologic abnormality
- 3. Brain: cerebellum no pathologic abnormality
- Thyroid gland, left follicular adenoma, 1cm
- Thyroid gland, right nodular hyperplasia (adenomatous goiter); follicular adenoma, 0.5
- Prostate gland benign prostatic hyperplasia
- Coronary artery, proximal LAD confirms the gross observation
- 9. Coronary arteries, left and right confirms the gross observation
- 10. Heart, left ventricle: acute inflammation with myocyte necrosis and contraction bands
- Hearts: septum acute inflammation with myocyte necrosis and contraction bands right ventricle - no pathologic abnormality
- Aorta: severe atherosclerosis
- Liver: centro-lobular congestion
  - Kidney: hyaline arteriolosclerosis; interstitial fibrosis
- 14/15. Lung: acute bronchopulmonary and lobar pneumonia; emphysematous change

#### ADDITIONAL PROCEDURES

- Documentary photographs are taken by the OAFME Photographer
- Specimens retained for toxicological testing and/or DNA identification are: vitreous fluid, blood, bile, liver, spleen, kidney, lung, brain, psoas muscle and gastric contents
- The dissected organs are forwarded with the body
- Personal effects are released to the appropriate mortuary operations representatives.

Muhaisin	(b)(6)
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# OPINION

Based on these autopsy findings and the investigative information available to me, the cause of death of (b)(6) is severe atherosclerotic cardiovascular disease complicated by an acute myocardial infarction and acute pneumonia. Additional incidental autopsy findings (non contributory to the cause of death) include a follicular adenoma and nodular hyperplasia of the thyroid gland and benign hypertrophy of the prostate gland. Toxicology findings show medications consistent with hospital care and resuscitation.

The manner of death is natural.



Armed Forces Medical Examiner System

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# ARMED FORCES INSTITUTE OF PATHOLOGY Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 1-301-319-0000



#### FINAL AUTOPSY EXAMINATION REPORT

Name: FURAYH AL MEHLAWY,

Muntasir Hamad

SSAN (b)(6)

Date of Birth: (BTB)(b)(6) 1988

Date of Death (b)(6) 2006

Date/Time of Autopsy: 4 Nov 2006 @ 1000

Date of Report: 18 Jan 2007

Autopsy No.: (b)(6)

AFIP No. (b)(6)

Rank: Iraqi Civilian Detainee Place of Death: Al Qailm, Iraq Place of Autopsy: Port Mortuary,

Dover AFB, DE

Circumstances of Death: This 18 year-old Iraqi Civilian Detainee was found unresponsive on his sleeping mat after reportedly being strangled by another detainee.

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

Identification: Presumptive identification is established by a wrist identification band. A DNA sample is taken for profile purposes if an exemplar becomes available for positive identification.

CAUSE OF DEATH:

ASPHYXIATION DUE TO LIGATURE

STRANGULATION

MANNER OF DEATH:

HOMICIDE

### FINAL AUTOPSY DIAGNOSES

#### VI. Evidence of Ligature Strangulation

- A. There is a circumferential, discontinuous superficial patterned abrasion on the neck demonstrating 1/16-inch periodicity, directed horizontally
- B. The abrasion crosses the superior 1/3 of the thyroid cartilage 10 ½-inches below the top of the head and extends on both sides of the neck, passing 1 ¾-inches below both ears, and measuring up to ½-inch in width
- C. The layer-wise anterior neck dissection demonstrates hemorrhage in the deep musculature (cricothyroid muscles), bilaterally
- D. Associated injuries
  - 1. The hyoid bone and thyroid cartilage are intact
  - The posterior neck dissection demonstrates no injury to the underlying soft tissue
  - There is confluent petechiae in the valleculae of the larynx, bilaterally
  - Petechiae are present on the mucosa of the lower lip and the right and left bulbar and inferior palpebral conjunctivae
  - Congestion of both lungs (right lung 600-grams, left lung 500-grams) and froth in both mainstem bronchi
- II. No significant natural disease is identified within the limitations of this examination
- III. There is no evidence of medical therapy
- IV. Identifying Body Marks or Tattoos
  - A. Scar, left upper chest, 1-inch
  - B. Scar, left elbow, 1-inch
- V. There is no evidence of physical abuse
- VI. Toxicology (AFIP)
  - A. Volatiles: No ethanol is detected in the blood and bile
  - B. Drugs: No drugs of abuse or medications are detected in the blood
  - C. Carbon Monoxide: The carboxyhemoglobin saturation in the blood is less than 1%
  - D. Cyanide: No cyanide is detected in the blood

## EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished appearing, muscular, 70-inch, 126pound male whose appearance is consistent with the reported age of 18 years. Lividity is fixed and posterior (except in areas exposed to pressure), rigor is absent, and the temperature is that of the refrigeration unit.

The scalp is covered with 3-inch brown hair in a normal distribution. The irides are brown, the corneae are cloudy and the pupils are round and equal in diameter. There are petechiae in both inferior palpebral conjunctivae and on both bulbar conjunctivae. The external auditory canals are clear, and the ears are unremarkable. The nares are patent. There are petechiae on the mucosa of the lower lip. The nose and maxillae are palpably stable. The teeth appear natural and in good condition.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric with a 1-inch scar on the upper left chest. The abdomen is flat with greenish discoloration. The genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The posterior torso is unremarkable. The buttocks and anus are unremarkable.

The upper and lower extremities are symmetric and without clubbing or edema. There is a 1-inch scar on the left elbow.

#### CLOTHING AND PERSONAL EFFECTS

The following clothing items and personal effects are present on the body at the time of autopsy:

- Orange shirt and pants
- White boxer shorts
- White T-shirt

#### MEDICAL INTERVENTION

There is no evidence of medical intervention

#### RADIOGRAPHS

A complete set of postmortem radiographs is obtained and demonstrates the following:

No fractures or metallic foreign bodies are identified

#### EVIDENCE OF INJURY

There is a circumferential, discontinuous superficial patterned abrasion on the neck demonstrating 1/16-inch periodicity that is directed horizontally. The abrasion crosses the superior one-third of the thyroid cartilage 10 ½-inches below the top of the head and then extends on both sides of the neck, passing 1 ¼-inches below each ear, measuring up to ½-inch in width. The layer-wise anterior neck dissection demonstrated hemorrhage in the deep musculature (cricothyroid muscles), bilaterally. The hyoid bone and thyroid cartilage were intact. The posterior neck dissection demonstrated no injury to the underlying soft tissue. The valleculae of the larynx demonstrate confluent petechiae, bilaterally. Petechiae were present on the inner lower lip, both sclerae, and both inferior conjunctivae.

#### INTERNAL EXAMINATION

#### HEAD AND CENTRAL NERVOUS SYSTEM:

The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. Clear cerebrospinal fluid surrounds the 1530-gram brain, which has unremarkable gyri and sulci. Coronal sections demonstrate sharp demarcation between white and grey matter, without hemorrhage or contusive injury. The ventricles are of normal size. The basal ganglia, brainstem, cerebellum, and arterial systems are free of injury or other abnormalities. There are no skull fractures. The atlanto-occipital joint is stable.

#### NECK:

See "Evidence of Injury," above. The thyroid gland is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries.

#### BODY CAVITIES:

The ribs, sternum, and vertebral bodies are visibly and palpably intact. No excess fluid is in the pleural, pericardial, or peritoneal cavities. The organs occupy their usual anatomic positions.

#### RESPIRATORY SYSTEM:

The right and left lungs weigh 600 and 500-grams, respectively. The external surfaces are smooth and deep red-purple. There is froth in both mainstem bronchi. The pulmonary parenchyma is diffusely congested and edematous. No mass lesions or areas of consolidation are present.

#### CARDIOVASCULAR SYSTEM:

The 300-gram heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. The coronary arteries are present in a normal distribution, with a right-dominant pattern. Cross sections of the vessels show no luminal narrowing. The myocardium is homogenous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 0.6 and 0.2-cm thick, respectively. The endocardium is smooth and glistening. The aorta gives rise to three intact and patent arch vessels. The renal and mesenteric vessels are unremarkable.

# FINAL AUTOPSY REPORT (b)(6) Furayh Al Mehlawi, Muntasir Hamad

#### LIVER & BILIARY SYSTEM:

The 1500-gram liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains 2-milliliters of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

#### SPLEEN:

The 100-gram spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested, with distinct Malpighian corpuscles.

#### PANCREAS:

The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

#### ADRENALS:

The right and left adrenal glands are symmetric, with bright yellow cortices and grey medullae. No masses or areas of hemorrhage are identified.

## GENITOURINARY SYSTEM:

The right and left kidneys weigh 100-grams each. The external surfaces are intact and smooth. The cut surfaces are red-tan and congested, with uniformly thick cortices and sharp corticomedullary junctions. The pelves are unremarkable and the ureters are normal in course and caliber. Gray-pink bladder mucosa overlies an intact bladder wall. The bladder contains no urine. The prostate is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

#### GASTROINTESTINAL TRACT:

The esophagus is intact and lined by smooth, gray-white mucosa. The stomach contains approximately 400-milliliters of semi-solid food material. The gastric wall is intact. The duodenum, loops of small bowel and colon are unremarkable. The appendix is absent.

#### MUSCULOSKELETAL SYSTEM:

There are no bone or joint abnormalities. Skeletal muscle development is normal. Superficial posterior incisions of the torso and extremities are negative for soft tissue hemorrhage.

## MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, with preparation of histological slides of the following organs: heart, lung, liver, kidney, and brain. The findings are:

- Lungs: Pulmonary edema and vascular congestion Heart: No significant microscopic abnormalities
- 2. Kidney and Liver: No significant microscopic abnormalities
- 3. Brain: No significant microscopic abnormalities

### ADDITIONAL PROCEDURES

- Documentary photographs are taken by OAFME staff photographers
- Specimens retained for toxicologic testing and/or DNA identification are: vitreous humor, blood, spleen, liver, bile, gastric contents, kidney, lung, brain, adipose tissue and psoas
- The dissected organs are forwarded with body
- Personal effects are released to the appropriate mortuary operations representatives

# OPINION

This 18 year-old Iraqi detainee died as a result of asphyxiation due to ligature strangulation. There was a circumferential, discontinuous superficial patterned abrasion on the neck. The anterior neck dissection demonstrated hemorrhage in the deep musculature (cricothyroid muscles), bilaterally. The hyoid bone and thyroid cartilage were intact. The posterior neck dissection demonstrated no injury to the underlying soft tissue. The valleculae of the larynx demonstrated hemorrhage bilaterally. Petechiae were present on the mucosa of the lower lip, both sclerae, and both inferior eyelids. There was no evidence of physical abuse. Microscopic studies were non-contributory to the cause of death. Toxicology studies were negative for ethanol and drugs of abuse. The manner of death is homicide.

(b)(6)		(b)(6)
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# ARMED FORCES INSTITUTE OF PATHOLOGY

# Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 (301) 319-0000



## FINAL AUTOPSY REPORT

Name: HAMID, Fadil Jadua Interment Serial (b)(6)		Au	topsy No: (t	0)(6)				
Date of Birth: (b)(6) 1978		AF	IP No(b)(6)					
Date of Death (b)(6) 2006		Place of Death: Camp Bucca, Iraq						
Date of Autopsy: 25 OCT 200 Date of Report: 14 FEB 2007		Place of Autopsy: Dover AFB Port Mortuary, Delaware						
Circumstances of Death:	0)(6)	was a 28	year-old n	nale, Iraqi	National, held as a			
detainee in Camp Bucca, Ira	q. He was	discovered	unresponsi	ve in his	room by cellmates			
Resuscitation efforts, including personnel and he was pronounded.					ccessful by medica			
Authorization for Autopsy:	Office of the	Armed Fo	rces Medica	l Examiner	, in accordance with			
Title 10 US Code, Section 147	1 (10 USC	1471).						
Identification: Positive ident	ification est	ablished by	investigativ	e agency				
	bable Caro Ventricular	United All 1881		idary to Co	oncentric Left			
MANNER OF DEATH: Na	tural							

#### AUTOPSY FINDINGS:

I. A. Heart: 470 grams

Concentric left ventricular hypertrophy (see cardiac consultation page 5)

Coronary arteries widely patent

B. Lungs:

Bilateral pulmonary edema (combined weight 1450 grams)

C. No external injuries

## II. Toxicological Examination:

- VOLATILES: The blood and urine are negative for ethanol at a cutoff level of 20 mg/dL.
- Peripheral blood contains less than 1% carboxyhemoglobin (COHgb) determined by spectrophotometry with a limit of quantitation of 1%. COHgb saturations of 0-3% are expected for non-smokers and 3-10% for smokers. Saturations above 10% are considered elevated and are confirmed by gas chromatography.
- There is no cyanide detected in the blood. The limit of quantitation for cyanide is 0.25 mg/L. Normal blood cyanide concentrations are less than 0.15 mg/L. Lethal concentrations of cyanide are greater than 3 mg/L.
- DRUGS: The blood is screened for acetaminophen, amphetamine, antidepressants, antihistamines, barbiturates, benzodiazepines, cannabinoids, chloroquine, cocaine, dextromethorphan, lidocaine, narcotic analgesics, opiates, phencyclidine, phenothiazines, salicylates, sympathomimetic amines and verapamil by gas chromatography, color test or immunoassay. The following drug is detected:
  - Lidocaine is detected in the blood by gas chromatography and confirmed by gas chromatography/mass spectrometry.

## EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished, 70 ½-inches tall, 178 pound Caucasian male who appears older than his reported age of 28 years. Lividity is marked and fixed on the posterior aspect of the body. Rigor is passing and the temperature is cold, that of the refrigerator. An identification tag is around the right great toe.

The scalp is covered with black hair in a normal distribution. Facial hair consists of a black beard. The irides are brown and the pupils are round and equal in diameter. The external auditory canals are clear. The ears are unremarkable. The nares are patent and the lips are atraumatic. The nose and maxillae are palpably stable. The teeth are natural.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. The abdomen is flat. The genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The buttocks and anus are unremarkable.

The upper and lower extremities are symmetric and without clubbing or edema.

## CLOTHING AND PERSONAL EFFECTS

The following clothing items are present on the body at the time of autopsy:

- · Yellow colored boxer shorts
- Yellow colored t-shirt
- Yellow colored long pants
- Personal effects are not present with the body

HAMID	(b)(6)
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## MEDICAL INTERVENTION

- Endotracheal intubation
- · Intravenous catheters in the right arm and groin
- Foley catheter in the penis
- Cardiac monitor pad on the left upper back

## RADIOGRAPHS

 A complete set of postmortem radiographs is obtained and demonstrates no traumatic injuries.

## EVIDENCE OF INJURY

There are no external injuries.

## INTERNAL EXAMINATION

<u>HEAD</u>: The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. There are no skull fractures. Clear cerebrospinal fluid surrounds the 1630gm brain, which has unremarkable gyri and sulci. The atlanto-occipital joint is stable.

The brain is referred for consultation at the AFIP Neuropathology Department and their report follows:

We examined the 1630 gram formalin-fixed brain submitted in reference to this case. Some unremarkable cerebral dura is received; no dural hemorrhage or sinus thrombosis is seen. The leptomeninges are clear with slight congestion; no exudate or hemorrhage is identified. The cerebral hemispheres are symmetric, with mildly compressed gyri that are normal in configuration. No softening or contusion is identified. The cranial nerve stumps are unremarkable. The circle of Willis has a normal configuration. No aneurysm, atherosclerosis, or occlusion is found in the intracranial arteries. The brain stem and cerebellum are externally normal. No subfalcial, transtentorial, or tonsillar herniation is seen. Coronal sections of cerebrum show no abnormalities in cortex, white matter, or deep gray matter nuclei. The lateral and 3<sup>rd</sup> ventricles are grossly normal. The hippocampi are symmetric and normal in size.

Horizontal sections of the brain stem and cerebellum reveal unremarkable cut surfaces. The substantia nigra and locus ceruleus are normally pigmented. The aqueduct is patent. The 4<sup>th</sup> ventricle is grossly normal. The spinal cord is not available for examination.

Histological sections: 1. Right superior/middle frontal gyri (superior inked black). 2. Right interior parietal lobule. 3. Right superior/middle temporal gyri at level of mamillary bodies (superior inked black). 4. Bilateral cingulated gyri (left inked black). 5. Right calcarine fissure with basal occipital gyri. 6. Right hippocampus at level of mamillary bodies. 7. Right hippocampus at level of lateral geniculate nucleus. 8. Right caudate/putamen with basal forebrain. 9. Right putamen/pallidum. 10. Bilateral thalamus/hypothalamus at level of mamillary bodies (left inked black). 11. Right thalamus at subthalamic nucleus. 12. Midbrain with substantia nigra (left inked black). 13. Pons (left inked black). 14. Medulla (left inked black). 15. Right cerebellum with dentate nucleus and folia. 16. Medullary-cervical junction (left inked black). 17. Left hippocampus at level of lateral geniculate nucleus. All tissue sections were processed in paraffin; sections were stained with H&E. This material was reviewed in conference by staff of the Department of Neuropathology and Ophthalmic Pathology.

Histological sections show scattered areas of acute neuronal injury in the deeper layers of the cerebral cortex, deep grapy matter nuclei, hippocampi (CA1 and dentate gyrus)., and cerebellum (Purkinje cells). Hippocampal sclerosis is not identified. A single small focus of perivascular chronic inflammatory cells is noted in the right hippocampus at the level of the mamillary body. Some scattered blood vessels throughout the brain have small numbers of perivascular hemosiderin-laden macrophages.

The brain shows acute neuronal injury, a non-specific finding that is commonly associated with hypoxic-ischemic change. Features diagnostic for malformation, storage disease, infection or neoplasm are not identified. No contusion or acute hemorrhage is seen.

<u>NECK</u>: The anterior strap muscles of the neck are homogenous and red-brown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa. The thyroid is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries.

Incision and dissection of the posterior neck demonstrates no deep paracervical muscular injury and no cervical spine fractures.

BODY CAVITIES: The ribs, sternum, and vertebral bodies are visibly and palpably intact. No excess fluid is in the pleural, pericardial or peritoneal cavities. The organs occupy their usual anatomic positions.

<u>RESPIRATORY SYSTEM</u>: The right and left lungs are markedly edematous and weigh 730 and 720 gm, respectively. The external surfaces are smooth and deep red-purple. The pulmonary parenchyma is diffusely congested and edematous. No mass lesions or areas of consolidation are present.

HAMID	(b)(6)	Ī
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<u>CARDIOVASCULAR SYSTEM</u>: The 470 gm heart is mildly enlarged and is contained in an intact pericardial sac. The heart is referred for consultation at the CV Path Institute and their report follows:

DIAGNOSIS: (b)(6) Concentric left ventricular hypertrophy

Heart: 470 grams (predicted normal value 350 grams, upper limit 463 grams for a 178lbs man); normal epicardial fat; closed foramen ovale; concentric left ventricular hypertrophy: left ventricular cavity diameter 35mm, left ventricular free wall thickness 15mm, ventricular septum thickness 17mm, right ventricle thickness 5mm, without gross scars or abnormal fat infiltrates; grossly unremarkable valves and endocardium; no gross myocardial fibrosis or necrosis; histologic sections show mild left ventricular myocyte hypertrophy, otherwise unremarkable.

Coronary arteries: Normal ostia; right dominance; no gross atherosclerosis

Conduction system: The sinoatrial node and nodal artery are unremarkable. The compact atrioventricular (AV) node shows mild fragmentation within the central fibrous body, without inflammation, necrosis, increased fat or proteoglycan. The penetrating bundle is centrally located and unremarkable. The left proximal bundle branch is intact and unremarkable. The right bundle branch is not seen in these sections. There are no discernible bypass tracts between the AV node and ventricular septum. There is no dysplasia of the AV nodal artery.

<u>LIVER & BILIARY SYSTEM</u>: The 1820 gm liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains 5 ml of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

<u>SPLEEN</u>: The 250 gm spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested, with distinct Malpighian corpuscles.

<u>PANCREAS</u>: The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

<u>ADRENALS</u>: The right and left adrenal glands are symmetric, with bright yellow cortices and grey medullae. No masses or areas of hemorrhage are identified.

GENITOURINARY SYSTEM: The right and left kidneys weigh 170 and 160 gm, respectively. The external surfaces are intact and smooth. The cut surfaces are red-tan and congested, with uniformly thick cortices and sharp corticomedullary junctions. The pelves are unremarkable and the ureters are normal in course and caliber. White bladder mucosa overlies an intact bladder wall. The bladder is empty. The prostate gland is normal in size, with lobular, yellow-tan

HAMID (b)(6)

parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

GASTROINTESTINAL TRACT: The esophagus is intact and lined by smooth, grey-white mucosa. The stomach contains approximately 90 ml of brown partially digested food. The gastric wall is intact. The duodenum, loops of small bowel and colon are unremarkable. The appendix is present.

## MUSCULOSKELETAL:

No traumatic abnormalities or hemorrhage of subcutaneous tissue, muscle or bone are identified. Nontraumatic abnormalities are not identified.

## ADDITIONAL PROCEDURES

- Documentary photographs are taken by the OAFME Photographer
- Identifying marks include a tattoo (b)(6)
- Specimens retained for toxicological testing and/or DNA identification are: vitreous fluid, blood, urine, spleen, liver, kidney, lung, bile, gastric contents, and psoas muscle.
- The dissected organs are forwarded with the body

## MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin with preparation of the following histologic slides:

Heart: see cardiac consultation page 5

Brain: see neuropathology consultation pages 3/4

- 1. Liver: sinusoidal and centrolobular congestion, otherwise no pathologic abnormality
- 2/3. Lung: focally marked alveolar congestion, otherwise no pathologic abnormality
- 4. Kidney: vascular congestion, otherwise no pathologic abnormality
- 5. Spleen and Adrenal Gland: no pathologic abnormality
- 6. Pancreas: mild autolysis, otherwise no pathologic abnormality

HAMID	(b)(6)

## OPINION

Based on these autopsy findings and the investigative information available to me, the cause of death of this Iraqi detainee (b)(6) is probable cardiac arrhythmia secondary to concentric left ventricular hypertrophy. Left ventricular hypertrophy is associated with cardiac arrhythmias and sudden death. Additional autopsy findings include marked pulmonary congestion and generalized congestion of the liver, spleen and kidneys; findings consistent with a fatal cardiac arrhythmia. There are no signs of external or internal trauma. Toxicology testing is positive for lidocaine; a drug used in cardiac resuscitation attempts, and is otherwise negative for ethanol or screened drugs of abuse. The manner of death is natural.

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## ARMED FORCES INSTITUTE OF PATHOLOGY Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 1-301-319-0000



## FINAL AUTOPSY EXAMINATION REPORT

Name: (BTB) HAZZAA AL DOULAIMEE,	Autopsy No.: (b)(6)
(b)(6)	55. 22 L
SSAN: (b)(6)	AFIP No.: (b)(6)
Date of Birth: (BTB (b)(6) 1982	Rank: Iraqi Civilian Detainee
Date of Death: (b)(6) 2006	Place of Death: Camp Bucca, Iraq
Date/Time of Autopsy: 17 OCT 2006 @ 1700	Place of Autopsy: BIAP Mortuary,
Date of Report: 17 NOV 2006	Baghdad, Iraq

Circumstances of Death: This 24-year-old Iraqi Civilian Detainee sustained a gunshot wound from U.S. Army soldiers during a firefight on 30 SEP 2006. He was resuscitated, received surgery and was stabilized prior to his transfer to Camp Bucca. He was ambulating with assistance and making progress when he was found unresponsive in his room, and could not be resuscitated.

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

Identification: Presumptive identification is established by a wrist identification band. A DNA sample is taken for profile purposes if an exemplar becomes available for positive identification.

CAUSE OF DEATH: GUNSHOT WOUND OF THE BACK
COMPLICATED BY PULMONARY EMBOLISM

MANNER OF DEATH: HOMICIDE

## FINAL AUTOPSY REPORT: (b)(6) (BTB) HAZZAA AL DOULAIMEE, Ezaldin Awanad

## FINAL AUTOPSY DIAGNOSES

#### Gunshot Wound of the Back

- A. Entrance Wound
  - Location: On the lower right back, 25-inches below the top of the head and 4-inches right of the posterior midline of the back in the anatomic position
  - Dimensions: An ovoid entrance wound measuring ¼ x 3/16-inch with eccentric marginal abrasion up to ¼-inch on the lateral border
- B. Wound Path: Skin and subcutaneous tissue of the lower right back, muscles of the lower right back, the spinous process of the 4<sup>th</sup> lumbar vertebra (fractured), muscles of the lower left back, subcutaneous tissue and skin of the upper left buttock
- C. Exit Wound
  - Location: On the upper left buttock, 29-inches below the top of the head, 38 ½-inches above the heel and 7-inches left of the posterior midline of the back in the anatomic position
  - Dimensions: An ovoid defect measuring 3 ¼ x 2 ½-inches, consistent with a debrided exit wound; packing material is present surrounding the exit wound
- D. Recovered: No bullet or bullet fragments are recovered; multiple radioopaque metallic fragments of no evidentiary value are observed radiographically in the region of the left buttock
- E. Direction: Slightly back to front, right to left and slightly downward
- F. Associated Injuries
  - A non-obstructive thromboembolus with valve markings and tributary casts is located at the bifurcation of the right and left pulmonary arteries ("saddle embolus"); multiple small obstructive thromboemboli are noted in the smaller branches of the right and left pulmonary arteries
  - Deep venous thromboses in the deep veins of the right and left legs
  - 3. Bleeding into the wound tract

## No significant natural diseases or pre-existing conditions are identified, within the limitations of this examination.

## III. Evidence of Medical Therapy

- A. A closed, 9-inch surgical incision is on the abdominal midline
- B. A medical dressing and packing are present on the lower right back
- C. A vacuum drain and a 3-inch closed surgical incision with packing is on the lower left back
- Needle stick marks are on the right subclavian region

## IV. Post-Mortem Changes

- A. Rigor is passing and equal in all extremities
- B. Livor is posterior and fixed except in areas exposed to pressure
- C. Marbling is present in areas of livor

D. Corneal clouding, bilaterally

## V. Identifying Body Marks

- A. Tattoo on (b)(6) (b)(6)
- B. Multiple irregular scars on the right back in a 3 ½ x ¼-inch area and ranging in size from punctate to ½ x ¼-inch

## VI. There is no evidence of physical abuse

- A. Layer-wise anterior neck dissection is negative for trauma
- Incision and dissection of the posterior neck demonstrates no deep paracervical muscular injury and no cervical spine fractures
- C. No petechiae are present on the conjunctivae or oral mucosa
- D. External examination is negative for trauma
- E. Radiographic skeletal survey is negative for trauma

## VII. Toxicology

- A. The blood and urine are tested for ethanol and none is found.
- B. The urine is screened for medications and drugs of abuse and the following medications are detected:
  - Oxymorphone (a narcotic analgesic) is detected in the urine, but is not present in the blood.
  - Oxycodone (a narcotic analgesic) is detected in the urine, but is not present in the blood.

## EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished appearing, 67-inch, 150-pounds (estimated) male whose appearance is consistent with the reported age of 24-years. Lividity is posterior and fixed with marbling in areas of lividity. Rigor is passing and equal in all extremities, and the temperature of the body is cold to touch.

The scalp is covered with black hair in a normal distribution; facial hair consists of a full beard and moustache. The irides are brown, the corneae cloudy, the conjunctivae pink without petechiae and the pupils are round and equal in diameter. The external auditory canals are patent and free of foreign material. The ears are unremarkable. The nares are patent and the lips are atraumatic. The nose and maxillae are palpably stable. The teeth appear natural.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. The abdomen is remarkable for a closed, 9-inch midline surgical incision. Injury to the posterior torso is described below (see "Evidence of Injury.") The genitalia are those of a normal adult male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The buttocks and anus are unremarkable.

The upper and lower extremities are symmetric and without clubbing or edema.

## CLOTHING AND PERSONAL EFFECTS

The body is received unclothed and without personal effects.

#### MEDICAL INTERVENTION

- · A closed, 9-inch surgical incision is on the abdominal midline
- A medical dressing and packing are present on the lower right back
- A vacuum drain and a 3-inch closed surgical incision with packing is on the lower left back
- Needle stick marks are on the right subclavian region

## RADIOGRAPHS

A complete set of postmortem radiographs is obtained and demonstrates the following:

- · No long bone fractures
- · No rib or skull fractures
- · No fractures of the bones of the hands or feet
- · Fracture of the spinous process of the 4th lumbar vertebra
- Multiple small radio-opaque metallic fragments are observed in the region of the left buttock

## EVIDENCE OF INJURY

The ordering of the following injuries is for descriptive purposes only, and is not intended to imply order of infliction or relative severity. All wound pathways are given relative to standard anatomic position.

#### Gunshot Wound of the Back

A gunshot entrance wound is on the lower right back, 25-inches below the top of the head and 4-inches right of the posterior midline of the back in the anatomic position. The ovoid entrance wound measures ½ x 3/16-inch with eccentric marginal abrasion up to ½-inch on the lateral border. The wound path perforates the skin and subcutaneous tissue of the lower right back, muscles of the lower right back, the spinous process of the 4<sup>th</sup> lumbar vertebra (fractured), muscles of the lower left back, subcutaneous tissue and skin of the upper left buttock. The bullet exited via an ovoid defect measuring 3 ½ x 2 ½-inches (consistent with a debrided exit wound; packing material is present surrounding the exit wound) and located on the upper left buttock, 29-inches below the top of the head, 38 ½-inches above the heel and 7-inches left of the posterior midline of the back in the anatomic position. No bullet or bullet fragments are recovered; multiple radio-opaque metallic fragments of no evidentiary value are observed radiographically in the

region of the left buttock. The wound path is directed slightly back to front, right to left and slightly downward.

Associated with the wound path is bleeding into the wound tract; a non-obstructive thromboembolus with valve markings and tributary casts is located at the bifurcation of the right and left pulmonary arteries ("saddle embolus") with multiple small obstructive thromboemboli noted in the smaller branches of the right and left pulmonary arteries, and deep venous thromboses in the deep veins of the right and left legs.

## INTERNAL EXAMINATION

## HEAD AND CENTRAL NERVOUS SYSTEM:

The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. Clear cerebrospinal fluid surrounds the 1,340-gram brain, which has unremarkable gyri and sulci. Coronal sections demonstrate sharp demarcation between white and gray matter, without hemorrhage or contusive injury. The ventricles are of normal size. The basal ganglia, brainstem, cerebellum, and arterial systems are free of injury or other abnormalities. There are no skull fractures. The atlanto-occipital joint is stable.

#### NECK:

Layer-wise dissection of the anterior strap muscles of the neck reveals homogenous and red-brown tissue without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa. The thyroid gland is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries.

Incision and dissection of the posterior neck demonstrates no deep paracervical muscular injury and no cervical spine fractures.

## BODY CAVITIES:

The ribs and sternum are visibly and palpably intact. No excess fluid is in the pleural, pericardial, or peritoneal cavities. The organs occupy their usual anatomic positions.

## RESPIRATORY SYSTEM:

The right and left lungs weigh 540 and 400-grams, respectively. The external surfaces are smooth and deep red-purple. The pulmonary parenchyma is diffusely congested and edematous. No mass lesions or areas of consolidation are present. Multiple small occlusive thromboemboli are noted in the smaller branches of the right and left pulmonary arteries.

#### CARDIOVASCULAR SYSTEM:

The 350-gram heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. The coronary arteries are present in a normal distribution, with a right-dominant pattern. Cross sections of the vessels show no luminal narrowing. The myocardium is homogenous, red-brown, and firm. The valve leaflets are

thin and mobile. The walls of the left and right ventricles are 1.2 and 0.5-centimeters thick, respectively. The endocardium is smooth and glistening. Upon opening the pulmonary artery while in situ, a non-occlusive thromboembolus with valve markings and tributary casts is located at the bifurcation of the right and left pulmonary arteries ("saddle embolus"). The aorta gives rise to three intact and patent arch vessels. The renal and mesenteric vessels are unremarkable.

#### LIVER & BILIARY SYSTEM:

The 1,870-gram liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains a minute amount of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

## SPLEEN:

The 290-gram spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested, with distinct Malpighian corpuscles.

#### PANCREAS:

The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

## ADRENALS:

The right and left adrenal glands are symmetric, with bright yellow cortices and gray medulae. No masses or areas of hemorrhage are identified.

#### GENITOURINARY SYSTEM:

The right and left kidneys weigh 150 and 180-grams, respectively. The external surfaces are intact and smooth. The cut surfaces are red-tan and congested, with uniformly thick cortices and sharp cortico-medullary junctions. The pelves are unremarkable and the ureters are normal in course and caliber. Gray-pink bladder mucosa overlies an intact bladder wall. The bladder contains approximately 75-milliliters of yellow urine. The prostate is normal in size, with lobular, yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

## GASTROINTESTINAL TRACT:

The esophagus is intact and lined by smooth, gray-white mucosa. The stomach contains approximately25-milliliters of tan fluid. The gastric wall is intact. The duodenum, loops of small bowel and colon are unremarkable. The appendix is present.

## MUSCULOSKELETAL SYSTEM:

There is no non-traumatic bone or joint abnormalities. Skeletal muscle development is normal.

## MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histological slides.

## ADDITIONAL PROCEDURES/REMARKS

- Documentary photographs are taken by AFMES staff photographers
- Specimens retained for toxicologic testing and/or DNA identification are: heart blood, vitreous fluid, gastric contents, urine, bile, spleen, liver, lung, kidney, brain, adipose tissue, and psoas muscle
- Full body radiographs are obtained and demonstrate the skeletal trauma described above and the presence of multiple small metallic foreign bodies surrounding the exit wound
- Projectiles are not recovered
- Selected portions of organs are retained in formalin, without preparation of histological slides
- The dissected organs are forwarded with the body

## OPINION

This 24-year-old Iraqi civilian detainet (b)(6) died of a gunshot of the back he sustained while in a firefight with U.S. Army personnel. He was stabilized and transported to a medical facility where he was ambulating with assistance when he was found unresponsive in his hospital bed. Aggressive resuscitation was to no avail. The gunshot entrance wound was located on the right lower back, and passed through the skin and soft tissue of the lower right back, the spinous process of the 4<sup>th</sup> lumbar vertebra and the soft tissue of the left lower back before exiting the upper left buttock. There was no evidence of close range fire, nor were any of the projectile fragments that were observed radiographically recovered. A significant complication of this gunshot wound was multiple occlusive and non-occlusive thromboemboli in the pulmonary arteries. Toxicological testing was negative for ethanol, and positive for the narcotic analgesics Oxycodone and Oxymorphone in the urine but not in the blood. The manner of death is homicide.

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## ARMED FORCES INSTITUTE OF PATHOLOGY Office of the Armed Forces Medical Examiner

1413 Research Blvd., Bldg. 102 Rockville, MD 20850 1-301-319-0000



## FINAL AUTOPSY EXAMINATION REPORT

Name: (BTB) ABBASS AL-		Autopsy No.:(b)(6)	
ISN: (b)(6)	imed	AFIP No.: (b)(6)	
Date of Birth: (BTB (b)(6)	1942	Rank: Iraqi Civilian Detainee	
Date of Death: (b)(6) 2006	5	Place of Death: Camp Cropper	, Irac
Date/Time of Autopsy: 15 C	CT 2006 @ 1000	Place of Autopsy: BIAP Morta	ary,
Date of Report: 19 IAN 200	7	Baghdad Irag	H H DEVIC

Circumstances of Death: This 64-year-old Iraqi male was a detainee at Camp Cropper, Iraq and undergoing treatment for tuberculosis. He had no other known medical problems. He was found unresponsive, and although ACLS protocol resuscitation was initiated, he expired.

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

Identification: Presumptive identification is established by a wrist identification band.
A DNA sample is taken for profile purposes if an exemplar becomes available for positive identification.

CAUSE OF DEATH: HYPERTENSIVE AND ARTERIOSCLEROTIC CARDIOVASCULAR DISEASE

MANNER OF DEATH: NATURAL

## FINAL AUTOPSY DIAGNOSES

## Cardiovascular Disease

- A. Coronary artery disease
  - 1. Luminal narrowing (75%)of the left main coronary artery
  - Luminal narrowing (90%) of the re-canalized left anterior descending coronary artery with calcification
  - Luminal narrowing (90%)of the left circumflex coronary artery with calcification
  - Luminal narrowing (>90%) of the right coronary artery with calcification, evidence of plaque rupture and fresh thrombus formation
  - Remote left posterior wall and septal infarction
- B. Cardiomegaly (heart weight 510-grams)
- C. Aortic atherosclerosis with ulceration and calcification
- D. Focal, diffuse glomerulosclerosis and arteriolosclerosis of the kidneys

## II. Other Findings

- A. Right renal calculi: Four irregular, green-brown calculi are recovered from the renal pelvis, and range in size from 0.3 to 0.5-centimeters
- B. Prostatic hypertrophy: The prostate is enlarged in size, 5.0 x 3.0 x 3.0-centimeters (no discrete nodules are identified), with associated muscular hypertrophy of the bladder
- C. Bullae of the right and left upper lobes of the lungs
- D. Pulmonary congestion
- E. Mild to moderate pulmonary emphysema
- F. Multiple lung and hilar lymph node sections are negative for mycobacterial infection (see Attachment 1 for complete details)

## III. Evidence of Medical Therapy

- A. A properly located endotracheal tube
- B. An intravenous line inserted in the right antecubital fossa
- C. A surgical-type mask covering the nose and mouth
- D. Rib fractures: anterior right 6th rib and anterior left 2nd through 6th ribs

## IV. Post-Mortem Changes

- A. Livor is posterior and fixed except in areas exposed to pressure
- B. Rigor has passed (absent) in all extremities
- C. The body is cold to touch

## V. Identifying Body Marks

A 0.7 x 0.5-centimeter brown papule is on the left groin

## VI. No evidence of physical abuse

## VII. Toxicology

A. The blood and urine are tested for ethanol and none is found.

B. The urine is screened for medications and drugs of abuse; Ethambutol (an antimycobacterial medication) is detected in the urine but is not quantitated in the blood.

## EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished appearing, 70 ½-inch and 150pound (estimated) male whose appearance is consistent with the reported age of 64-years. Lividity is posterior and fixed. Rigor is absent (passed), and the temperature is cold to touch.

The scalp is covered with gray hair in a normal distribution; facial hair consists of a moustache. The irides are hazel, the corneae are cloudy and the pupils are round and equal in diameter. The external auditory canals are patent and free of foreign material. The ears are unremarkable. The nares are patent and the lips are atraumatic. The nose and maxillae are palpably stable. The teeth appear natural and in fair condition.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. The abdomen is flat. The genitalia are those of a normal adult male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The buttocks and anus are unremarkable. There is a 0.7 x 0.5-centimeter soft brown papule in the left inguinal fold.

The upper and lower extremities are symmetric and without clubbing or edema. The fingernails are trimmed and intact.

## CLOTHING AND PERSONAL EFFECTS

The following clothing items and personal effects are present on the body at the time of autopsy:

- Yellow top
- Yellow pants
- White boxer shorts

#### MEDICAL INTERVENTION

- A properly located endotracheal tube
- An intravenous line inserted in the right antecubital fossa
- · A surgical-type mask covering the nose and mouth
- Rib fractures: anterior right 6<sup>th</sup> rib and anterior left 2<sup>nd</sup> through 6<sup>th</sup> ribs

## RADIOGRAPHS

A complete set of postmortem radiographs is obtained and demonstrates the following:

- No fractures of the skull, axial skeleton, or long bones
- · No metallic foreign bodies other than medical therapy

## EVIDENCE OF INJURY

There is no evidence of recent, significant injury.

## INTERNAL EXAMINATION

### HEAD AND CENTRAL NERVOUS SYSTEM:

The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. Clear cerebrospinal fluid surrounds the 1,240-gram brain, which has unremarkable gyri and sulci. Coronal sections demonstrate sharp demarcation between white and gray matter, without hemorrhage or contusive injury. The ventricles are of normal size. The basal ganglia, brainstem, and cerebellum are free of injury or other abnormalities. There is mild atherosclerosis of the arteries at the base of the brain. There are no skull fractures. The atlanto-occipital joint is stable.

#### NECK:

By layer-wise dissection, the anterior strap muscles of the neck are homogenous and redbrown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa. The thyroid gland is symmetric and red-brown, without cystic or nodular change. The tongue is free of bite marks, hemorrhage, or other injuries.

## BODY CAVITIES:

The sternum and vertebral bodies are visibly and palpably intact. Injuries to the ribs are described above (see "Medical Intervention," above). No excess fluid is in the pleural, pericardial, or peritoneal cavities. The organs occupy their usual anatomic positions.

## RESPIRATORY SYSTEM:

The right and left lungs weigh 840 and 725-grams, respectively. The external surfaces are smooth and deep red-purple. Bullae are grossly identifiable in the apices of both lungs. The pulmonary parenchyma is diffusely congested and edematous. No mass lesions or areas of consolidation are present.

## CARDIOVASCULAR SYSTEM:

The 510-gram heart is contained in an intact pericardial sac. The epicardial surface is smooth, with moderate fat investment. The coronary arteries are present in a normal distribution, with a right-dominant pattern. Cross sections of the vessels show moderate to marked luminal narrowing of the left main coronary artery and severe luminal narrowing of the left anterior descending and left circumflex coronary arteries. The

# FINAL AUTOPSY REPORT: (b)(6) (BTB) ABBASS AL-ZUBAIDI, Najim M.

Page 5 of 8

lumen of the right coronary artery appears to be of a pinpoint diameter. All of the coronary arteries are focally calcified. The myocardium is homogenous, red-brown, and firm except in the posterior left ventricle and posterior septum where there is a dense white scar. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 1.2 and 0.3-centimeters thick, respectively. The endocardium is smooth and glistening. The aorta gives rise to three intact and patent arch vessels and has multiple atherosclerotic plaques and ulceration with calcification along the entire length. The renal and mesenteric vessels are unremarkable.

## LIVER & BILIARY SYSTEM:

The 1,440-gram liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is tan-brown and congested, with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains 2-milliliters of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

#### SPLEEN:

The 130-gram spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested, with distinct lymphoid follicles.

#### PANCREAS:

The pancreas is autolytic and saponified, with the usual lobular architecture. No mass lesions or other abnormalities are seen.

## ADRENALS:

The right and left adrenal glands are autolytic and symmetric, with bright yellow cortices and gray medullae. No masses or areas of hemorrhage are identified.

## GENITOURINARY SYSTEM:

The right and left kidneys weigh 200 and 160-grams, respectively. The external surfaces are intact and smooth. The cut surfaces are red-tan and congested, with uniformly thick cortices and sharp cortico-medullary junctions. The pelvis of the right kidney contains four irregular brown stones which range in size from 0.3 to 0.5-centimeters; the left kidney pelvis is unremarkable. Both ureters are normal in course and caliber. Gray-pink bladder mucosa overlies an intact, hypertrophic bladder wall with trabeculae. The bladder contains approximately 30-milliliters of cloudy yellow urine. The prostate is enlarged, with cysts containing viscous brown fluid and yellow-tan parenchyma. The seminal vesicles are unremarkable. The testes are free of mass lesions, contusions, or other abnormalities.

## GASTROINTESTINAL TRACT:

The esophagus is intact and lined by smooth, gray-white mucosa. The stomach contains approximately 200-milliliters of brown-green fluid with food particles. The gastric wall is intact. The duodenum, loops of small bowel and colon are unremarkable. The appendix is present.

## MUSCULOSKELETAL SYSTEM:

There is no non-traumatic bone or joint abnormalities. Skeletal muscle development is normal. Superficial incisions of the posterior torso and extremities are negative for soft tissue trauma.

## MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, with preparation of selected histological slides.

## RESPIRATORY SYSTEM

Lung (Slides 1-5): Multiple sections are examined which demonstrate mild interstitial fibrosis and macrophages with anthracotic pigment. Mild to moderate emphysematous changes and vascular congestion are noted. Special stains fail to demonstrate mycobacteria (see Attachment 1 for complete details).

Hilar lymph node (Slide 6): Anthracotic pigment is present in macrophages; otherwise an unremarkable lymph node. Special stains fail to demonstrate mycobacteria (see Attachment 1 for complete details).

#### GENITOURINARY SYSTEM

Seminal Vesicle (Slide 7): Cystic dilatation and inspissation of secretions <u>Kidneys</u> (Slides 8 and 9): Focal, diffuse glomerulosclerosis and arteriolosclerosis. Mild, focal chronic inflammation and focal calcification is present.

## CARDIOVASCULAR SYSTEM

Left ventricular myocardium and scar (Slide 10): Hypertrophic myocytes with enlarged nuclei, interstitial fibrosis and dense endocardial-based scar.

Left main coronary artery (Slide 11): Luminal narrowing (75%) by intimal hypertrophy, cholesterol clefts and chronic inflammation.

Left anterior descending coronary artery (Slide 12): Luminal narrowing (90%) by intimal hypertrophy, cholesterol clefts and chronic inflammation. Recanalization of the artery and focal calcification are also present.

Left circumflex coronary artery (Slide 13): Luminal narrowing (90%) by intimal hypertrophy, cholesterol clefts and chronic inflammation.

Right coronary artery (Slide 14): Luminal narrowing (>90%) by intimal hypertrophy, cholesterol clefts and chronic inflammation. Plaque rupture with hemorrhage into the media and fresh thrombus formation are noted.

#### ADDITIONAL PROCEDURES/REMARKS

Documentary photographs are taken by AFMES staff photographers

## FINAL AUTOPSY REPORT: (b)(6) (BTB) ABBASS AL-ZUBAIDI, Najim M.

- Specimens retained for toxicologic testing and/or DNA identification are: heart blood, vitreous fluid, gastric contents, urine, bile, spleen, liver, lung, kidney, brain, adipose tissue, and psoas muscle
- Full body radiographs are obtained and demonstrate the absence of skeletal trauma and the absence of metallic foreign bodies
- · Selected portions of organs are retained in formalin, with preparation of histological slides
- The dissected organs are forwarded with the body
- · Personal effects are released to the mortuary affairs representatives

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