



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: Al-Saaida, Muhammed A.

Detainee Number: (b)(6)

Date of Birth: (b)(6) 1965

Date of Death: (b)(6) 2009

Date/Time of Autopsy: 29 Jul 2009 @ 0900

Date of Report: 21 Sep 2009

Autopsy No.: (b)(6)

AFIP No.: (b)(6)

Rank: Detainee

Place of Death: Iraq

Place of Autopsy: Port Mortuary,

Dover Air Force Base, DE

Circumstances of Death: This 44 year-old detainee was being held in custody in Iraq. By report, he was witnessed to collapse by several other detainees at approximately 1600 on (b)(6) 2009. Resuscitation was initiated and he was transferred to the nearest medical facility. All resuscitative efforts were unsuccessful.

Authorization for Autopsy: Armed Forces Medical Examiner, per U.S. Code 10, Section 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint comparison.

CAUSE OF DEATH: Atherosclerotic cardiovascular disease

MANNER OF DEATH: Natural

EXTERNAL EXAMINATION

The body is received in a black body bag. Attached to the outermost bag are two paper tags with the name (b)(6). The body is unclad. Paper bags are present on the hands. A paper tag is attached to the left great toe labeled with the name (b)(6). A white tag labeled (b)(6) is placed on the left ankle at intake by mortuary affairs.

The body is that of a well-developed, well-nourished male. The body weighs 170-pounds and measures 67-inches in length. The body is cold. 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. There is mild marbling of the upper and lower extremities.

Injuries to the head and neck are described below in "Evidence of Injury." The head is normocephalic, and the scalp hair is black-gray and short. Facial hair consists of a black-gray beard and moustache. The irides appear brown in color. The corneas are cloudy. The conjunctivae are congested. The sclerae are congested. The external auditory canals, external nares and oral cavity are free of foreign material and abnormal secretions. The earlobes are not pierced. The nasal skeleton and maxilla are palpably intact. The lips are without evident injury. The teeth are natural and in good condition. The neck is straight, and the trachea is midline and mobile.

The chest is symmetric with no external evidence of injury to the ribs or sternum. The posterior torso demonstrates no evidence of trauma. The abdomen is flat with no healed surgical scars present. The genitalia are those of a circumcised adult male. Pubic hair is present in a normal distribution. The anus is non-traumatic. The testes are descended with no palpable masses present.

Injuries to the extremities are described in "Evidence of Injury." The upper and lower extremities are symmetric and without clubbing, edema, fractures, lacerations or deformities. The fingernails are intact and trimmed. The toenails are dystrophic.

Well-healed irregular scars are present on both lower extremities. There are three scars on the medial right thigh, each measuring ½ x ½-inches. There is a 12 x 1-inch irregular scar on the lateral left thigh. There is a 3 x 1-inch irregular scar and a ½ x ½-inch scar on the anterior left thigh. There is a 3 x 1-inch scar on the popliteal fossa of the right knee. There are numerous radio-opaque foreign bodies identified on radiography in both lower extremities that are too small to be recovered.

CLOTHING AND PERSONAL EFFECTS

The following clothing items are received with the body at the time of autopsy:

- Yellow shirt (torn)
- Yellow sweatpants
- White boxer shorts

MEDICAL INTERVENTION

- EKG leads on anterior torso (6)
- Defibrillator pads on left upper torso and left upper back
- Intravascular catheters in the right and left antecubital fossae
- Anterior right rib fractures of 4-5th ribs
- Anterior left rib fracture of 4th rib

RADIOGRAPHS

A complete set of postmortem radiographs is obtained and show no evidence of acute injury.

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EVIDENCE OF INJURY**Minor injuries:**

A ½ x ¼-inch superficial abrasion is on the anterior surface of the scalp. A ½ x ¼-inch abrasion is on the dorsal surface of the left hand.

INTERNAL EXAMINATION**BODY CAVITIES:**

See "Medical Intervention." No excess fluid is in the pleural, pericardial, or peritoneal cavities. The organs occupy their usual anatomic positions. The subcutaneous fat layer of the abdominal wall is unremarkable.

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:

See "Evidence of Injury." The galeal and subgaleal soft tissues of the scalp are free of injury. There are no skull fractures. The dura mater is intact with no evidence of hemorrhage. The leptomeninges are thin and delicate. Clear cerebrospinal fluid surrounds the 1383-gram brain, which has unremarkable gyri and sulci. The brain was retained and fixed for Neuropathology consultation (see Appendix A: Neuropathology Consultation). The atlanto-occipital joint is stable. The upper spinal cord is unremarkable.

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 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.

RESPIRATORY SYSTEM:

The airways are clear of debris and foreign material and the mucosal surfaces are smooth, yellow-tan, and unremarkable. The right and left lungs weigh 680-grams each. 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. The pulmonary arteries are normally developed and patent. The diaphragm is intact.

CARDIOVASCULAR SYSTEM:

The 480-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 left-dominant pattern. The proximal left anterior descending coronary artery has greater than 90% atherosclerotic narrowing. The mid left anterior descending coronary artery has a tunnel measuring 0.3-centimeters in depth and 1.5-centimeters in length. The circumflex artery has 50% atherosclerotic narrowing. The right coronary artery has 10% atherosclerotic narrowing. Cross-sections through the myocardium show a 3-centimeter pale area of the posterior left ventricle and posterior ventricular septum. The valve leaflets are thin and mobile. The walls of the left ventricle, interventricular septum, and right ventricle are 1.3, 1.5, and 0.3-centimeters thick, respectively. The endocardium is smooth and glistening. The aorta gives rise to three intact and patent arch vessels with mild atherosclerotic plaque. The renal, mesenteric, and iliac vessels as well as the venae cavae are unremarkable.

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HEPATOBIILIARY SYSTEM:

The 1700-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 10-milliliters of green-black bile and no stones. The mucosal surface is green and velvety.

LYMPHORETICULAR SYSTEM:

The 160-gram spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon and congested. Lymph nodes in the hilar, periaortic, and iliac regions are unremarkable.

ENDOCRINE SYSTEM:

The pituitary gland is unremarkable. The thyroid gland has been described (see NECK, above). The right and left adrenal glands are symmetric, with bright yellow cortices and red-brown medullae. No masses or areas of hemorrhage are identified.

GENITOURINARY SYSTEM:

The right and left kidneys weigh 160-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. White bladder mucosa overlies an intact bladder wall. The bladder contains approximately 8-milliliters of 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 375-milliliters of tan fluid and partially digested food particles. The gastric wall is intact. The duodenum, loops of small bowel and colon are unremarkable. The pancreas is autolyzed with no mass lesions or other abnormalities seen. The appendix is present.

MUSCULOSKELETAL SYSTEM:

No non-traumatic abnormalities of the muscles or bones of the appendicular and axial skeletons are identified. Dissection of the skin of the back, upper and lower extremities show no evidence of deep tissue hemorrhage. Dissection of the skin of the ankles and wrists show no evidence of hemorrhage.

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin with preparation of histologic slides.

- The liver shows congestion and no significant periportal inflammation or portal fibrosis. There is mild steatosis.
- The kidney shows autolysis of the proximal tubules with relative sparing of the glomeruli, distal tubules, and collecting system. There is occasional glomerulosclerosis, mild-moderate hyaline arteriosclerosis, and scattered patchy chronic inflammation.
- The spleen shows congested parenchyma with normal lymphoid follicle formation and autolytic change.

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- The lung shows atelectasis with multifocal congestion with no significant intra-alveolar or interstitial inflammation.
- The thyroid shows normal follicles with no increased inflammation or fibrosis.
- The myocardium shows properly arranged myocytes that are with mild enlargement ("boxcar" nuclei). There is no significant increase in fibrosis or inflammation
- The proximal left anterior descending coronary artery shows greater than 90% atherosclerotic narrowing.
- The mid left anterior descending coronary artery shows tunneling of the artery into the myocardium
- The posterior wall of the left ventricle shows extensive fibrosis with no significant acute or chronic inflammation

Slide key:

Slide 1: Thyroid, liver

Slide 2: Spleen, kidney

Slide 3: Right lung

Slide 4: Left lung

Slide 5: Proximal left anterior descending coronary artery

Slide 6: Mid left anterior descending coronary artery with tunneling

Slide 7: Posterior left ventricle

ADDITIONAL PROCEDURES AND REMARKS

1. Documentary photographs are taken by (b)(6) (AFMES staff photographer). Assisting with the autopsy is (b)(6) (AFMES staff).
2. Personal effects are released to the appropriate mortuary operations representatives.
3. Specimens retained for toxicology testing and/or DNA identification are: vitreous fluid, blood, urine, bile, gastric contents, lung, liver, spleen, kidney, psoas muscle, adipose tissue, and myocardium.
4. The dissected organs are forwarded with body.
5. No evidence is recovered.

FINAL AUTOPSY DIAGNOSES

- I. Minor abrasions:**
 - a. Superficial abrasion on anterior surface of the scalp
 - b. Superficial abrasion on dorsal surface of the left hand
- II. Natural disease:**
 - a. Severe coronary atherosclerosis
 - i. Greater than 90% atherosclerotic narrowing of the proximal left anterior descending coronary artery
 - ii. 50% atherosclerotic narrowing of the circumflex artery
 - iii. 10% atherosclerotic narrowing of the right coronary artery
 - iv. Remote infarction of the posterior left ventricle and posterior ventricular septum
 - b. Tunneling of the mid left anterior descending coronary artery
- III. Medical therapy:**
 - a. EKG leads (6)
 - b. Defibrillator pads (2)
 - c. Intravascular catheters in right and left antecubital fossae
 - d. Fractures of anterior right 4-5th ribs and anterior left 4th rib, consistent with cardiopulmonary resuscitation
- IV. Post-mortem changes:**
 - a. Rigor is present and equal in all extremities
 - b. Lividity is posterior and fixed except in areas exposed to pressure
 - c. The body temperature is cold
 - d. Changes of decomposition including marbling of the upper and lower extremities
- V. Identifying marks:**
 - a. Scars: multiple scars on both lower extremities with associated retained radio-opaque foreign bodies identified radiographically
- VI. Toxicology:**
 - a. Volatiles: No ethanol is detected in the blood
 - b. Drugs: No screened medications or drugs of abuse are detected in the blood
 - c. Carbon Monoxide¹: carboxyhemoglobin saturation in the blood was less than 1%
 - d. Cyanide: No cyanide is detected in the blood

¹ Carboxyhemoglobin saturations of 0-3% are expected for non-smokers and 3-10% for smokers.

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OPINION

This detainee, (b)(6) died as a result of atherosclerotic cardiovascular disease. He had greater than 90% atherosclerotic narrowing of the proximal left anterior descending coronary artery, 50% atherosclerotic narrowing of the circumflex artery, and 10% atherosclerotic narrowing of the right coronary artery. There was fibrosis of the posterior wall of the left ventricle and posterior ventricular septum indicating a healed infarction. The histologic changes in the kidney are consistent with hypertension. The toxicology screen is negative for ethanol, carbon monoxide, cyanide, drugs of abuse, and screened medications. The manner of death is natural.

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Medical Examiner

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(b)(6)

Medical Examiner

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Appendix A: Neuropathology Consultation**GROSS DESCRIPTION:**

Brain weight: 1383 mg

The specimen consists of the dura and brain of an adult.

The intracranial dura is not remarkable. The venous sinuses are patent.

Due to early autolysis, the external features of the brain are slightly discolored red-brown and the cut surfaces are discolored gray. The brain is well fixed.

The leptomeninges are thin, delicate and transparent. The cerebral gyri have an anatomically normal size, configuration and consistency. The perisellar, perimesencephalic and cerebellomedullary cisterns have a normal configuration and size.

There is no sign of herniation or midline shift. Moderately deep tentorial grooves indent each uncus approximately 0.4 cm from the medial margins. The cerebellar tonsils have a normal configuration. The external aspects of the brainstem and cerebellum are not remarkable. The arteries at the base of the brain follow a normal distribution and show moderately severe atherosclerosis. There are no aneurismal dilatations or sites of occlusion. The identifiable cranial nerve roots are not remarkable.

Coronal sections of the cerebrum reveal no focal or diffuse abnormalities in the cortex, white matter or deep nuclear structures. Due to autolysis, the septum pellucidum is almost completely dissolved. There is no midline shift. Sections of the midbrain, pons, medulla and cerebellum show no diffuse or focal abnormalities. The substantia nigra and locus coeruleus are well pigmented. Except as noted, the ventricular system has an anatomically normal size and configuration. The aqueduct of Sylvius and the foramina of Luschka and Magendie are patent. The choroid plexus is unremarkable and the ependymal surfaces are smooth and glistening.

PHOTOGRAPHS: Yes**MICROSCOPIC EXAMINATION:**

Blocks of tissue for microscopic examination are removed from : (1) left frontal lobe, (2) anterior corpus callosum/cingulate gyri/septum pellucidum, (3) left insula/claustrum/external capsule/putamen/globus pallidus/internal capsule, (4) right thalamus/posterior limb of internal capsule, (5) left hippocampus, (6) left occipital lobe/occipital horn of lateral ventricle, (7) right cerebellum, (8) left pons/medulla/cerebellum (cerebellomedullary cistern), (9) dura.

Sections from each block are stained with H&E, LFB, Bielschowsky and iron (Prussian Blue) techniques and immunostained for β -amyloid precursor protein (β -APP).

MICROSCOPIC FINDINGS:

The microscopic sections show mild/moderate autolysis of the ependymal surfaces and septum pellucidum.

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In the section of cerebellomedullary cistern that includes midline cerebellum and floor of the fourth ventricle there are small foci of acute subarachnoid hemorrhage in the cerebellar folia that are consistent with agonal ischemia. There is no associated vascular anomaly or tumor.

In scattered areas of the cerebral cortex and basal ganglia there are individual moderately eosinophilic neurons suggestive of early ischemic neuronal injury.

DIAGNOSIS:

Brain, autopsy:

1. Early ischemic neuronal injury
2. Mild postmortem autolysis

(b)(6)

NEUROPATHOLOGIST

15 Sep 2009

CERTIFICATE OF DEATH (OVERSEAS) Acte de décès (D'Outre-Mer)								
NAME OF DECEASED (Last, First, Middle) Nom du décédé (Nom et prénoms) Al-Saaida, Muhammed, Abd Frayh			GRADE Grade 		BRANCH OF SERVICE Arme Civilian		SOCIAL SECURITY NUMBER Numéro de l'Assurance Social (b)(6)	
ORGANIZATION Organisation 			NATION (e.g. United States) Pays Iraq		DATE OF BIRTH Date de naissance (b)(6) 1965		SEX Sexe <input checked="" type="checkbox"/> MALE <input type="checkbox"/> FEMALE	
RACE Race		MARITAL STATUS État Civil			RELIGION Culte			
<input checked="" type="checkbox"/>	CAUCASOID Caucasique	<input type="checkbox"/>	SINGLE Célibataire	<input type="checkbox"/>	DIVORCED Divorcé	<input type="checkbox"/>	PROTESTANT Protéstant	<input checked="" type="checkbox"/> OTHER (Specify) Autre (Spécifier)
<input type="checkbox"/>	NEGROID Négride	<input type="checkbox"/>	MARRIED Marié	<input type="checkbox"/>	SEPARATED Séparé	<input type="checkbox"/>	CATHOLIC Catholique	
<input type="checkbox"/>	OTHER (Specify) Autre (Spécifier)	<input type="checkbox"/>	WIDOWED Veuf	<input type="checkbox"/>		<input type="checkbox"/>	JEWISH Juif	
NAME OF NEXT OF KIN Nom du plus proche parent				RELATIONSHIP TO DECEASED Parenté du décédé avec le sus				
STREET ADDRESS Domicile à (Rue)				CITY OR TOWN OR STATE (Include ZIP Code) Ville (Code postal compris)				
MEDICAL STATEMENT Déclaration médicale								
CAUSE OF DEATH (Enter only one cause per line) Cause du décès (N'indiquer qu'une cause par ligne)							INTERVAL BETWEEN ONSET AND DEATH Intervalle entre l'attaque et le décès	
DISEASE OR CONDITION DIRECTLY LEADING TO DEATH ¹ Maladie ou condition directement responsable de la mort				Atherosclerotic cardiovascular disease				
ANTECEDENT CAUSES Symptômes précurseurs de la mort		MORBID CONDITION, IF ANY, LEADING TO PRIMARY CAUSE Condition morbide, s'il y a lieu, menant à la cause primaire						
		UNDERLYING CAUSE, IF ANY, GIVING RISE TO PRIMARY CAUSE Condition morbide, s'il y a lieu, menant à la cause primaire						
OTHER SIGNIFICANT CONDITIONS ² Autres conditions significatives								
MODE OF DEATH Condition de décès		AUTOPSY PERFORMED Autopsie effectuée <input checked="" type="checkbox"/> YES Oui <input type="checkbox"/> NO Non				CIRCUMSTANCES SURROUNDING DEATH DUE TO EXTERNAL CAUSES Circonstances de la mort suscitées par des causes extérieures		
<input checked="" type="checkbox"/>	NATURAL Mort naturelle	MAJOR FINDINGS OF AUTOPSY Conclusions principales de l'autopsie						
<input type="checkbox"/>	ACCIDENT Mort accidentelle							
<input type="checkbox"/>	SUICIDE Suicide							
<input type="checkbox"/>	HOMICIDE Homicide	NAME OF PATHOLOGIST Nom du pathologiste (b)(6)		SIGNATURE Si (b)(6)		DATE Date 29 July 2009		AVIATION ACCIDENT Accident à Avion <input type="checkbox"/> YES Oui <input checked="" type="checkbox"/> NO Non
DATE OF DEATH (day, month, year) Date de décès (le jour, le mois, l'année) (b)(6) 2009		PLACE OF DEATH Lieu de décès Camp Bucca Iraq						
I HAVE VIEWED THE REMAINS OF THE DECEASED AND DEATH OCCURRED AT THE TIME INDICATED AND FROM THE CAUSES AS STATED ABOVE. J'ai examiné les restes mortels du défunt et je conclus que le décès est survenu à l'heure indiquée et à la suite des causes énumérées ci-dessus.								
NAME OF MEDICAL OFFICER Nom du médecin militaire ou du médecin sanitaire (b)(6)				TITLE OR DEGREE Titre ou diplôme Medical Examiner				
GRADE Grade (b)(6)		INSTALLATION OR ADDRESS Installation ou adresse Dover AFB, Dover DE						
DATE Date 9/21/2009		SIGNATURE (b)(6)						

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REPLACES DA FORM 3545, 1 JAN 72 AND DA FORM 3545-RIPAS, 26 SEP 75, WHICH ARE OBSOLETE.

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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 OR ADDRESS (b)(6)	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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