



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

Autopsy No.: (b)(6)

Interment Serial Number (b)(6)

AFIP No.: (b)(6)

Date of Birth: (b)(6) 1973

Rank: Civilian, Iraqi national

Date of Death (b)(6) 2005

Place of Death: Bucca, Iraq

Date of Autopsy: 04 February 2005

Place of Autopsy: Baghdad, Iraq

Date of Report: 12 April 2005

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:

- I. Atherosclerotic cardiovascular disease (Cardiovascular Pathology consultation)
 - a. Moderate coronary artery atherosclerosis
 - i. Left anterior descending artery (LAD): 40% luminal narrowing of proximal LAD by pathologic intimal thickening with smooth muscle rich intimal proliferation
 - ii. Left circumflex artery (LCA): 50% narrowing of proximal LCA by proximal intimal thickening
 - iii. Right coronary artery (RCA): 60% narrowing of proximal to mid RCA by pathologic intimal thickening with smooth muscle rich neointimal proliferation
 - b. 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
 - i. 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 reveals 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

AUTOPSY REPORT (b)(6)
MOHAMMED SALUN, Sohaib Mansoor

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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 sinoatrial 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 subendocardial 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 discernible 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)

TO:

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

PATIENT IDENTIFICATION

AFIP Accessions Number Sequence
(b)(6)

Name
MOHAMMED SALAM, SOHAIB MANSOR

SSAN: Autopsy: (b)(6)

Toxicology Accession #: (b)(6)

Date Report Generated: February 27, 2005

CONSULTATION REPORT ON CONTRIBUTOR MATERIAL

AFIP DIAGNOSIS REPORT OF TOXICOLOGICAL EXAMINATION

Condition of Specimens: GOOD

Date of Incident (b)(6) 2005 Date Received: 2/16/2005

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

DRUGS: The **HEART 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. The following drugs were detected:

None were found.

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CERTIFICATE OF DEATH (OVERSEAS) Acte de décès (D'Outre-Mer)			
NAME OF DECEASED (Last, First, Middle) Nom du décédé (Nom et prénoms) BTB Mohammed Salun, Sohaib, Mansoor		GRADE Grade Arme Iraqi Detainee	SOCIAL SECURITY NUMBER Numéro de l'Assurance Sociale (b)(6)
ORGANIZATION Organisation		NATION (e.g., United States) Pays Iraq	DATE OF BIRTH Date de naissance (b)(6) 1973
RACE Race		MARITAL STATUS État Civil	
CAUCASOID Caucasiqne	SINGLE Célibataire	DIVORCED Divorcé	PROTESTANT Protestant
NEGROID Négride	MARRIED Marié	SEPARATED Séparé	CATHOLIC Catholique
<input checked="" type="checkbox"/> OTHER (Specify) Autre (Spécifier) Other	WIDOWED Veuf		JEWISH Juif
NAME OF NEXT OF KIN Nom du plus proche parent		RELATIONSHIP TO DECEASED Parenté du décédé avec le susdit	
STREET ADDRESS Domicile à (Rue)		CITY OR TOWN AND STATE (include ZIP Code) Ville (Code postal compris)	
MEDICAL STATEMENT Déclaration médicale			
CAUSE OF DEATH (Enter only once cause per line) Cause du décès (l'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			Pending
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 Raison fondamentale, s'il y a lieu, ayant suscité 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	
NATURAL Mort naturelle	MAJOR FINDINGS OF AUTOPSY Conclusions principales de l'autopsie		Mode of Death: Pending
ACCIDENT Mort accidentée			
SUICIDE Suicide	NAME OF PATHOLOGIST Nom du pathologiste (b)(6)		
HOMICIDE Homicide	SIGNATURE (b)(6)	DATE Date 04 Feb 2005	AVIATION ACCIDENT Accident à Avion <input type="checkbox"/> YES Oui <input checked="" type="checkbox"/> NO Non
DATE OF DEATH (Hour, day, month, year) Date de décès (l'heure, le jour, le mois, l'année)		PLACE OF DEATH Lieu de décès 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 dé funéré 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, DE 19902		
DATE Date 29 March 05	SIGNATURE (b)(6)		
¹ State disease, injury or complication which caused death, but not mode or type such as heart failure, etc. ² State conditions contributing to the death, but not related to the disease or condition causing death. ¹ Préciser la nature de la maladie, de la blessure ou de la complication qui a contribué à la mort, mais non la manière de mourir, telle qu'un arrêt du coeur, etc. ² Préciser la condition qui a contribué à la mort, mais n'ayant aucun rapport avec le maladie ou à la condition qui a provoqué la mort.			

(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	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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