



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: (b)(6)-4

Autopsy No.: ME04-38

AFIP Number: 2914569

Internment Sequence Number: B9550

Date of Birth: 15 November 1978

Date/Time of Death: 16 January 2004/0545

Place of Death: Abu Ghurayb Prison, Iraq

Date/Time of Autopsy: 02 February 2004/ 1400

Place of Autopsy: Mortuary Facility, Baghdad International Airport, Iraq

Circumstances of Death: Collapsed while performing morning prayers.

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

Identification: Identification Tag

CAUSE OF DEATH: MYOCARDITIS

MANNER OF DEATH: NATURAL

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FINAL AUTOPSY DIAGNOSES:

I. CARDIOVASCULAR SYSTEM:

A. MYOCARDITIS WITH FOCAL NECROSIS AND SCARRING

B. FOCAL MODERATE CORONARY ATHEROSCLEROSIS

**1. 60% STENOSIS OF PROXIMAL LEFT ANTERIOR DESCENDING
CORONARY ARTERY**

2. 40% STENOSIS OF LEFT MAIN CORONARY ARTERY

II. RESPIRATORY SYSTEM:

A. BILATERAL PULMONARY EDEMA (850 GRAMS EACH)

III. HEPATOBILIARY SYSTEM:

A. FOCAL HEPATIC STEATOSIS

IV. NO EVIDENCE OF SIGNIFICANT TRAUMA

**V. TOXICOLOGY IS NEGATIVE FOR ETHANOL, DRUGS OF ABUSE, AND
CYANIDE**

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EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished appearing, muscular, 74 inch tall male whose appearance is consistent with the reported age of 25 years. Lividity is present in the posterior dependent portions of the body, except in areas exposed to pressure. Upon initial examination, the body is frozen. Thawing is accomplished over four days. Rigor has passed, and the temperature is eventually that of ambient room.

The scalp is covered with straight black hair in a normal distribution. A beard is present. The irides are brown and the pupils are round and equal in diameter. No conjunctival petechiae are present. The external auditory canals are unremarkable. 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 good 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.

The upper and lower extremities are symmetric and without clubbing or edema. There is no external evidence of trauma.

CLOTHING AND PERSONAL EFFECTS

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

- Grey shirt
- Grey sweatshirt
- Orange jumpsuit
- White boxers
- 2 pairs of socks, one white, one black
- Blanket

MEDICAL INTERVENTION

There is no evidence of recent medical intervention.

RADIOGRAPHS

A complete set of postmortem radiographs is obtained and demonstrates no evidence of skeletal trauma.

EVIDENCE OF INJURY

There is no evidence of significant recent injury.

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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 1300 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.

NECK:

A separate layerwise dissection of the neck is performed. 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. 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 850 gm 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.

CARDIOVASCULAR SYSTEM:

The 450 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. The myocardium is homogenous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left and right ventricles are 2.0 and 0.8 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 (see AFIP consultation report below).

LIVER & BILIARY SYSTEM:

The 2450 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 a minute amount of green-black bile and no stones. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

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SPLEEN:

The 360 gm 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 220 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 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. The stomach contains approximately 30 cc of brown fluid. The gastric wall is intact. The duodenum, loops of small bowel, and colon are unremarkable. The appendix is present.

ADDITIONAL PROCEDURES

- Documentary photographs are taken by AFIP photographer.
- Specimens retained for toxicologic testing and/or DNA identification are: blood, spleen, liver, brain, bile.
- The dissected organs are forwarded with body
- Personal effects are released to the appropriate mortuary operations representatives

MICROSCOPIC EXAMINATION**Cassette Summary:**

1. Right ventricle
2. Anterior left ventricle
3. Interventricular septum
4. Liver
5. Spleen
6. Kidney
7. Brain
8. Lung
9. Lung
10. Pancreas

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Microscopic Description:

BRAIN: unremarkable.

LUNGS: eosinophilic proteinaceous material within alveolar spaces bilaterally.

HEART: see AFIP consultation below.

LIVER: focal macrovesicular steatosis without inflammation or increased fibrosis.

SPLEEN: autolytic; otherwise unremarkable.

PANCREAS: autolytic; otherwise unremarkable.

KIDNEY: autolytic; otherwise unremarkable.

**CONSULTATION FROM DR. (b)(6)-2 CARDIOVASCULAR
PATHOLOGY DEPARTMENT, ARMED FORCES INSTITUTE OF PATHOLOGY:**

Heart: 450 grams; normal epicardial fat; closed foramen ovale, normal left ventricular chamber dimensions: left ventricular cavity diameter 40 mm, left ventricular free wall thickness 13 mm, ventricular septum thickness 15 mm; right ventricular thickness 4 mm, without gross scars or abnormal fat infiltrates; marked post-mortem decompositional changes, otherwise unremarkable valves, endocardium, and myocardium; histologic changes show multiple foci of interstitial and replacement fibrosis, some of which are associated with lymphocytic infiltrates; a section from the posterior left ventricle shows a subepicardial focus of granulomatous inflammation with central fibrinoid necrosis; special stains including Brown-Brenn, Brown-Hopps, Ziehl-Neilsen, GMS, and Warthin-Starry are negative for microorganisms.

Coronary Arteries: Normal ostia; right dominance; focal moderate atherosclerosis:

Left main coronary artery: 40% luminal narrowing by pathologic intimal thickening

Left anterior descending coronary artery: 60% narrowing of proximal LAD by pathologic intimal thickening; no other significant atherosclerosis.

Diagnosis:

1. Myocarditis with focal necrosis and scarring
2. Focal moderate coronary atherosclerosis

Comment: In most instances myocarditis is caused by viral organisms, however the histologic appearance in this case is atypical with areas of granulomatous inflammation and fibrinoid necrosis. The granulomas do not have the usual non-necrotizing appearance of sarcoidosis. All special stains for microorganisms are negative. Other possible causes of myocarditis includes various bacterial, fungal, and Mycobacterial

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organisms, and negative stains do not indicate absence of disease. This case was also reviewed by the Infectious Disease Department.

OPINION

This 25 year-old detainee died as a result of MYOCARDITIS (inflammation of the heart). There is no evidence of significant trauma. The manner of death is NATURAL.

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CAPT MC USN
Regional Armed Forces Medical Examiner



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

REPLY TO
ATTENTION OF

AFIP-CME-T

PATIENT IDENTIFICATION

AFIP Accessions Number Sequence
2914569 00

Name

(b)(6)-4

SSAN: Autopsy: ME04-038
Toxicology Accession #: 040468
Report Date: FEBRUARY 23, 2004

TO:

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

CONSULTATION REPORT ON CONTRIBUTOR MATERIAL

AFIP DIAGNOSIS REPORT OF TOXICOLOGICAL EXAMINATION

Condition of Specimens: GOOD

Date of Incident: 1/16/2004 Date Received: 2/5/2004

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

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

None were found.

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PhD

Certifying Scientist, Forensic Toxicology Laboratory
Office of the Armed Forces Medical Examiner

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Director, Forensic Toxicology Laboratory
Office of the Armed Forces Medical Examiner

| CERTIFICATE OF DEATH (OVERSEAS) Acte de décès (D'Outre-Mer) | | | |
|--|--|---|---|
| NAME OF DECEASED (Last, First, Middle) Nom du décédé (Nom, et prénoms) (b)(6)4 | | GRADE Grade | BRANCH OF SERVICE Arme |
| ORGANIZATION Organisation Detainee in Iraq | | NATION (e.g., United States) Pays Iraq | DATE OF BIRTH Date de naissance |
| RACE Race | | MARITAL STATUS État Civil | SEX Sexe |
| <input checked="" type="checkbox"/> CAUCASOID Caucasique | <input type="checkbox"/> SINGLE Célibataire | <input type="checkbox"/> DIVORCED Divorcé | <input checked="" type="checkbox"/> MALE Masculin |
| <input type="checkbox"/> NEGROID Negride | <input type="checkbox"/> MARRIED Marié | <input type="checkbox"/> PROTESTANT Protestant | <input type="checkbox"/> FEMALE Féminin |
| <input type="checkbox"/> OTHER (Specify) Autre (Spécifier) | <input type="checkbox"/> WIDOWED Veuf | <input type="checkbox"/> SEPARATED Séparé | <input type="checkbox"/> OTHER (Specify) Autre (Spécifier) |
| NAME OF NEXT OF KIN Nom du plus proche parent | | RELATIONSHIP TO DECEASED Parenté du décédé avec le susdit | |
| STREET ADDRESS Domicilé 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 (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. ¹ | | Myocarditis | |
| 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 ² | | | |
| 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 | NAME OF PATHOLOGIST Nom du pathologiste (b)(6)-2 CAPT, MC, USN | | |
| <input type="checkbox"/> SUICIDE Suicide | DATE Date 02 Feb 2004 | | AVIATION ACCIDENT Accident à Avion <input type="checkbox"/> YES Oui <input checked="" type="checkbox"/> NO Non |
| <input type="checkbox"/> HOMICIDE Homicide | PLACE OF DEATH Lieu de décès Iraq | | |
| DATE OF DEATH (Hour, Day, Month, Year) Date de décès (l'heure, le jour, le mois, l'année) 16 Jan 2004 | 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)-2 | TITLE OR DEGREE Titre ou diplôme Armed Forces Medical Examiner | | |
| GRADE Grade CDR | INSTALLATION OR ADDRESS Installation ou adresse Dover AFB, DE 19902 | | |
| DATE Date 14 JAN 2004 | SIGNATURE Signature (b)(6)-2 CAPT MC USN AFMC | | |
| ¹ State disease, injury or complication which caused death, but not related to the disease or condition causing death. 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 la maladie ou à la condition qui a provoqué la mort. | | | |

DD FORM 2064 1 APR 77 REPLACES DA FORM 3565, 1 JAN 72 AND DA FORM 3565-R(PAS), 26 SEP 75, WHICH ARE OBSOLETE.

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