



**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 EXAMINATION REPORT**

Name: BTB Faisel, Ghazi al-Duri  
 CID: (b)(6)  
 Date of Birth: (b)(6) 1940  
 Date of Death: (b)(6) 2006  
 Date/Time of Autopsy: 04 June 2006/1130  
 Date of Report: 22 May 2007

Autopsy No.: (b)(6)  
 AFIP No.: (b)(6)  
 Rank: CIV  
 Place of Death: Iraq  
 Place of Autopsy: Port Mortuary  
 Dover AFB, Dover DE

**Circumstances of Death:** This 66 year old male civilian detainee reportedly collapsed while exiting the latrine.

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

**Identification:** Presumptive, according to ID band.

**CAUSE OF DEATH:** Complications of atrial and ventricular myocardial fibrosis.

**MANNER OF DEATH:** Natural.

**FINAL AUTOPSY DIAGNOSES**

- I. Focal and diffuse atrial and ventricular fibrosis.
- II. Moderate aortic atherosclerosis.
- III. Bilateral pulmonary congestion and edema (right 960 gm, left 790 gm).
- IV. Evidence of injury:
  - A. Non-displaced fracture of the cervical vertebrae (C5/6 disk space).
  - B. Contusion (2 x ¾ inches) of the right forehead.
  - C. Contusion (1 ½ x 1 ¼ inches) of the right infraorbital region of the face.
  - D. Laceration (3/8 inch) of the nasal bridge.
  - E. Abrasion (1 ¼ x ¾ inch) of the posterior surface of the left forearm.
- V. Toxicology: Nordiazepam present in the blood; elevated blood levels of aluminum.

**EXTERNAL EXAMINATION**

The body is that of a well-developed male weighing 190 pounds, measuring 68 inches in length and appearing compatible with the reported age of 66 years. The body temperature is cool after refrigeration. Rigor is passing. Lividity is fixed and present predominately on the posterior surfaces of the body, except in areas exposed to pressure.

There is male pattern baldness. The remaining scalp hair is brown gray. Facial hair consists of a mostly gray beard and mustache. The irides are brown. The corneae are cloudy. The conjunctivae are unremarkable. The sclerae are congested. The external auditory canals, external nares and oral cavity are free of foreign material and abnormal secretions. The nasal skeleton is palpably intact. The teeth appear natural and in fair condition.

The neck is straight, and the trachea is midline and mobile. The chest is symmetric. No evidence of injury of the ribs or the sternum is evident externally. The abdomen is flat. The fingernails are intact. The extremities show evidence of injury to be described below. A (b)(6) tattoo (b)(6)

(b)(6) tattoo (b)(6)  
(b)(6) tattoo (b)(6)  
(b)(6) tattoo (b)(6)

(b)(6) (b)(6) A circular scar is present on the right buttock measuring ¼ inch. A ¼ inch scar is present on the medial surface of the right lower leg. A ¼ inch circular scar is present on the posterior lateral surface of the right lower leg. The external genitalia are those of a normal adult male. A 1 ¼ inch cystic lesion is present on the right mid back. The buttocks and anus are unremarkable.

**CLOTHING AND PERSONAL EFFECTS**

- 1. A pair of black slippers.
- 2. White boxer style shorts.
- 3. Red pants.

**EVIDENCE OF INJURY**

Head and neck:

A 2 x ¼ inch abraded contusion is present on the right forehead. There is a 1 ½ x 1 ¼ inch abraded contusion present in the right infraorbital region. A 3/8 inch laceration is present on the nasal bridge. A 1 x ¼ inch contusion is present in the right posterior parietal region of the scalp. Galeal hemorrhage is present in the right frontal region. A non-displaced fracture of the anterior cervical vertebrae with surrounding intramuscular hemorrhage is present at the C5/6 disk space. The adjacent spinal cord shows no gross evidence of injury.

Extremities:

There is a 1 ¼ x ¾ inch abrasion present on the dorsal surface of the left forearm.

**EVIDENCE OF MEDICAL THERAPY**

None.

## 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 normal anatomical position. The subcutaneous fat layer of the abdominal wall is 1 ½ inches thick. There is no evidence of blunt force or penetrating injury to the thoraco-abdominal region. Longitudinal incisions of the posterior surfaces of the torso, upper and lower extremities show no evidence of recent injury.

### HEAD (CENTRAL NERVOUS SYSTEM):

(See above "Evidence of Injury")

The scalp is reflected. The calvarium of the skull is removed. The dura mater and falx are intact. There is no epidural or subdural 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. After fixation, coronal sections through the cerebral hemispheres reveal no lesions. Transverse sections through the brainstem and cerebellum are unremarkable. The brain weighs 1380 gm.

### NECK:

(See above "Evidence of Injury")

Layer-wise examination of the anterior and posterior strap muscles of the neck show them to be homogenous red-brown and 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.

### RESPIRATORY SYSTEM:

The right and left lungs weigh 960 gm and 790 gm, respectively. The external surfaces are smooth and deep red-purple. The pulmonary parenchyma is moderately congested and edematous. No mass lesions or areas of consolidation are present.

### CARDIOVASCULAR SYSTEM:

The 480 gm heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. The coronary arteries arise normally, follow the usual distribution, and are without evidence of significant atherosclerosis or thrombosis. The myocardium is homogenous, red-brown, and firm; the atrial and ventricular septa are intact. The aorta gives rise to three intact and patent arch vessels. There are moderate atherosclerotic changes at the iliac bifurcation. The vena cava and its major tributaries return to the heart in the usual distribution. The renal and mesenteric vessels are unremarkable.

### LIVER & BILIARY SYSTEM:

The 1670 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 is empty. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

### SPLEEN:

The 240 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 GLANDS:**

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 each weigh 180 gm. 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. Tan 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, grey-white mucosa. The stomach contains approximately 50 ml of liquid material. The gastric wall is intact. The duodenum, loops of small bowel and colon are unremarkable. The appendix is not identified.

**MUSCULOSKELETAL SYSTEM:**

(See above "Evidence of Injury")

Muscle development is normal. No evidence of non-traumatic bone or joint abnormalities is noted.

**RADIOLOGIC EXAMINATION**

Full body radiographs are obtained and reveal a metallic fragment in the right lower leg.

**MICROSCOPIC EXAMINATION**

1. Heart (slides 1-right coronary artery, right ventricle; 2-left ventricular posterior wall; 3-left ventricular lateral wall; 4-left ventricular anterior wall; 5-septum): mild coronary atherosclerosis (1); patchy subendocardial (2) and interstitial fibrosis (4).
  - a. Conduction system
    - i. Region of the sino-atrial (SA) node, slides 11,12: marked, predominately interstitial atrial fibrosis, mild thickening of the SA nodal artery, unremarkable appearing SA node.
    - ii. Region of the atrioventricular (AV) node, slides 13-17: focal replacement fibrosis near the crest of the ventricular septum (13), mild thickening of AV nodal artery, AV node without significant microscopic abnormality (16).
2. Brain (slides 6,7): focal cerebrovascular intimal thickening (7).
3. Spleen (slide 8): no significant microscopic abnormality.
4. Liver (slide 8): congestion.
5. Lungs (slide 9): congestion with patchy pulmonary edema and atelectasis.
6. Kidneys (slide 10): autolysis.

**ADDITIONAL PROCEDURES**

- Documentary photographs are taken by the OAFME staff photographers.
- Specimens retained for toxicologic testing and/or DNA identification are: blood, bile, gastric contents, vitreous, lung, liver, kidney, spleen, adipose tissue and psoas muscle.
- The heart, brain and selected portions of organs are retained in formalin.
- Personal effects are released to the appropriate mortuary operations representatives.

**OPINION**

According to reports, this 66 year old male Civilian detainee reportedly collapsed while exiting the latrine. He was unresponsive to resuscitative efforts and was ultimately pronounced dead. Additional medical information or history was not available.

Autopsy examination showed contusions of the right side of the face and scalp and laceration of the bridge of the nose. Examination of the neck revealed a non-displaced fracture without apparent cord injury. No evidence of additional significant injury was identified. Radiologic examination showed the presence of a metallic fragment in the right lower leg, consistent with remote injury. Microscopic examination of the heart showed both atrial and ventricular fibrosis. Routine postmortem toxicological examination showed the presence of nordiazepam (blood 0.029 mg/l). Extended testing for heavy metals showed elevated levels of aluminum in the blood. Levels for arsenic and cadmium were not elevated and uranium and lead were below detection limits.

Although the exact etiology of the myocardial fibrosis is uncertain, the interstitial pattern and the degree of atrial involvement are suggestive of amyloid. Special stains (Congo red) were equivocal, however. Whatever the cause, lethal cardiac arrhythmia is a significant complication associated with myocardial fibrosis. In the current case, both the circumstances and autopsy findings are consistent with collapse following a cardiac event. The facial and neck injuries were most consistent with a terminal fall. Postmortem toxicological testing showed low levels of a metabolite of the therapeutic agent Valium. Elevated levels of aluminum have been associated with neurotoxicity<sup>1</sup>, but the significance of this finding in the current case is uncertain.

In summary, this decedent most likely died of complications (lethal cardiac arrhythmia) of cardiac myocardial fibrosis. The manner of death is natural.

(b)(6)

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

<sup>1</sup> <http://en.wikipedia.org/wiki/Aluminium>

CERTIFICATE OF DEATH (OVERSEAS) Acte de décès (D'Outre-Mer)			
NAME OF DECEASED (Last, First, Middle) Nom du décédé (Nom et prénoms) <b>BTB Faisel, Ghazi, Al-Duri</b>		GRADE Grade	BRANCH OF SERVICE Arme <b>Civilian</b>
		SOCIAL SECURITY NUMBER Numéro de l'Assurance Social <b>(b)(6)</b>	
ORGANIZATION Organisation		NATION (e.g. United States) Pays <b>Iraq</b>	DATE OF BIRTH Date de naissance <b>(b)(6) 1940</b>
		SEX Sexe <input checked="" type="checkbox"/> MALE <input type="checkbox"/> FEMALE	
RACE Race		MARITAL STATUS Etat Civil	
<input checked="" type="checkbox"/> CAUCASOID Caucasique		<input type="checkbox"/> SINGLE Célibataire	
<input type="checkbox"/> NEGROID Négre		<input type="checkbox"/> DIVORCED Divorcé	
<input type="checkbox"/> OTHER (Specify) Autre (Spécifier)		<input type="checkbox"/> SEPARATED Séparé	
		<input type="checkbox"/> WIDOWED Veuf	
		RELIGION Culte	
		<input type="checkbox"/> PROTESTANT Protestant	
		<input type="checkbox"/> CATHOLIC Catholique	
		<input checked="" type="checkbox"/> OTHER (Specify) Autre (Spécifier)	
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 <sup>1</sup> Maladie ou condition directement responsable de la mort.			Complications of atrial and ventricular myocardial fibrosis
ANTECEDENT CAUSES Symptômes précurseurs de la mort.			Unknown
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 <sup>2</sup> Autres conditions significatives <sup>2</sup>			
MODE OF DEATH Condition de décès	AUTOPSY PERFORMED Autopsie effectuée	CIRCUMSTANCES SURROUNDING DEATH DUE TO EXTERNAL CAUSES Circonstances de la mort suscitées par des causes extérieures	
<input checked="" type="checkbox"/> NATURAL Mort naturelle	<input checked="" type="checkbox"/> YES Oui		
<input type="checkbox"/> ACCIDENT Mort accidentelle	<input type="checkbox"/> NO Non		
<input type="checkbox"/> SUICIDE Suicide	NAME OF PATHOLOGIST Nom du pathologiste <b>(b)(6)</b>		
<input type="checkbox"/> HOMICIDE Homicide	SIGNATURE <b>(b)(6)</b>	DATE <b>4 June 2006</b>	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>(b)(6) 2006</b>	PLACE OF DEATH Lieu de décès <b>Iraq</b>		
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 funt 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>(b)(6)</b>		TITLE OR DEGREE Titre ou diplôme <b>Medical Examiner</b>	
GRADE Grade <b>(b)(6)</b>	INSTALLATION OR ADDRESS Installation ou adresse <b>Dover AFB, Dover DE</b>		
DATE Date <b>6/1/2007</b>	SIGNATURE <b>(b)(6)</b>		
<sup>1</sup> State disease, injury or complication which caused death, but not mode of dying. <i>Indiquer la maladie, la blessure ou la complication qui a causé la mort, mais non la manière de mourir, telle qu'un anévrisme du cœur, etc.</i> <sup>2</sup> State conditions contributing to the death, but not related to the disease or condition causing death. <i>Indiquer les conditions contribuant à la mort, mais non liées à la maladie ou à la condition qui a provoqué la mort.</i>			

DD FORM 1 APR 77 2064

REPLACES DA FORM 3885, 1 JAN 72 AND DA FORM 3885-R(PAS), 28 SEP 76, WHICH ARE OBSOLETE.

MEDCOM 0578