



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: BTR Abdal. Ahmad Khalaf
SSAN: (b)(6)
Date of Birth: BTI (b)(6) 1947
Date of Death: (b)(6) 2007
Date/Time of Autopsy: 09 JAN 2007 @ 0900
Date of Report: 06 APR 2007

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

Circumstances of Death: This 59 year-old civilian was detained at Camp Ripper, Al Asad, Iraq when, as reported, he died during an interrogation with a human exploitation team member. Per report, he appeared to have fainted thirty minutes into the interrogation and became unresponsive.

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

Identification: Presumptive identification by examination of papers in case file. Post-mortem fingerprints and specimen suitable for DNA analysis are obtained.

CAUSE OF DEATH: **Atherosclerotic cardiovascular disease**
 Mitral valve prolapse with annular calcification

MANNER OF DEATH: **Undetermined**

FINAL AUTOPSY DIAGNOSES

I. Pathologic diagnoses:

A. Cardiovascular system:

1. Focal healed subendocardial infarct, lateral and posterior left ventricle
2. Left ventricular hypertrophy with subendocardial and perivascular interstitial fibrosis
3. Mitral valve prolapse with annular calcification
4. Focal moderate coronary atherosclerosis
5. Cardiomegaly, 530 grams
6. Mild atherosclerotic disease of the aorta and arteries of the base of the brain

B. Respiratory system:

1. Congested lungs:
 - i. Right lung, 740 grams
 - ii. Left lung, 500 grams
2. No evidence of pulmonary thromboembolism

II. No evidence of significant recent injury

III. Minor injuries:

- A. Abrasion of the posterior left forearm, 1/8 inch
- B. Abrasion of the posterior left hand, 1/8 inch
- C. Healing abrasion of the forehead, 1/8 inch

IV. Evidence of medical intervention:

- A. Intravenous catheters in the right and left antecubital fossae
- B. Defibrillator pad mark/abrasion, left side of the chest, 2 x 1/2 inch

V. Post-mortem changes:

- A. Lividity is fixed on the posterior surface of the body except in areas exposed to pressure
- B. Rigor is passed in all extremities
- C. Cloudy corneae

VI. Toxicology (AFIP):

- A. VOLATILES: No ethanol detected in the blood and vitreous fluid
- B. DRUGS: No screened drugs of abuse/medications detected in the urine
- C. CARBON MONOXIDE: Carboxyhemoglobin saturation in the blood was less than 1%*
- D. CYANIDE: No cyanide detected in the blood

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

EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished white male. The body is 66 inches in length, weighs 175 pounds, and appears compatible with the stated age of 59 years old. The body is cold. Lividity is fixed on the posterior surface of the body except in the areas exposed to pressure. The head and neck are suffused. Rigor has passed in both the upper and lower extremities.

The head is normocephalic. The scalp hair is grey/black with male pattern baldness. Facial hair consists of a grey moustache and beard. The irides are indistinct. The corneae are cloudy. The conjunctivae are congested. The sclerae are white. The external auditory canals, nasal cavity, and oral cavity are free of foreign material and abnormal secretions. The earlobes are not pierced. The nasal skeleton is palpably intact. The lips are without evident injury. The teeth are natural and in poor condition. The upper two incisors are absent with a denture in place. There are no petechiae of the oral mucosa. There is a 1/4 x 1/8 skin tag of the right eyelid. The neck is straight, and the trachea is midline and mobile with no evidence of injury. There are multiple skin tags of the neck ranging from 1/8 inch to 1/4 inch in greatest dimension.

The chest is symmetric. There are multiple 1/8 inch skin tags in both axillae. The abdomen is flat. The genitalia are those of a normal adult male with no evidence of injury. There are two, 1 inch, round scars on the back. (b)(6) tattoo (b)(6) There is a 2 x 1 x 1 inch skin tag of the natal fold. The anus is unremarkable.

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

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(b)(6) tattoo (b)(6) There is a 1 inch circular scar of the anterior right thigh. There are two circular scars of the lateral right leg, 1 inch and 1/2 inch, respectively. There is a 1/4 x 1/8 inch skin tag of the posterior right leg. (b)(6) tattoo (b)(6) There are two circular scars of the lateral left leg, 3/4 inch and 1-1/2 inch, respectively. The palms of the hands and soles of the feet are callous.

CLOTHING AND PERSONAL EFFECTS

The body is in an orange shirt (cut), white t-shirt (cut), orange pants, and white boxers. Brown paper evidence bags are secured with evidence tape over both hands.

MEDICAL INTERVENTION

Intravenous catheters are in the right and left antecubital fossae. There is a 2 x 1/2 inch abrasion of the left side of the chest consistent with defibrillator pad placement.

RADIOGRAPHS

A complete set of postmortem radiographs is obtained and do not demonstrate evidence of injury.

EVIDENCE OF INJURY

There is a 1/8 inch healing abrasion of the forehead. There is a 1/8 inch abrasion of the posterior left forearm. There is a 1/8 inch abrasion of the posterior left hand.

INTERNAL EXAMINATION

HEAD: (CENTRAL NERVOUS SYSTEM)

The scalp is reflected. 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 cerebral hemispheres are symmetrical. The structures at the base of the brain, including cranial nerves and blood vessels are intact. There is mild, non-occlusive atherosclerotic disease of the arteries. Coronal sections through the cerebral hemispheres and transverse sections through the brainstem and cerebellum are unremarkable. The brain weighs 1440 grams.

NECK:

The anterior and posterior strap muscles of the neck are homogenous and red-brown, without hemorrhage (separate anterior and posterior neck dissections). 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.

BODY CAVITIES:

The ribs, sternum, and vertebral bodies are visibly and palpably intact. There is 20 milliliters of serosanguinous fluid in each of the thoracic cavities. No excess fluid is in the pericardial or peritoneal cavities. The organs occupy their usual anatomic positions.

RESPIRATORY SYSTEM:

The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth, yellow-tan and unremarkable. The right and left lungs weigh 740 and 500 grams, respectively (expected 360-570 grams and 325-480 grams). The external surfaces are smooth, glistening and unremarkable. The pulmonary parenchyma is red-purple exuding slight to moderate amounts of blood. No mass lesions or areas of consolidation are present. The pulmonary arteries are normally developed and patent without thrombus or embolus.

CARDIOVASCULAR SYSTEM:

The 530 gram (expected 265-460 grams) heart is contained in an intact pericardial sac. The heart was retained and sent for cardiovascular pathology consultation (see addendum). The aorta has mild atherosclerotic disease.

LIVER & BILIARY SYSTEM:

The 1800 gram liver has an intact, smooth capsule and a sharp anterior border. The parenchyma is moderately congested and tan-brown with the usual lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder contains 20 milliliters of green bile. The extrahepatic biliary tree is patent.

SPLEEN:

The 250 gram spleen has a smooth, intact, red-purple capsule. The parenchyma is maroon with unremarkable lymphoid follicles.

PANCREAS:

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

ADRENALS:

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 210 and 220 gm, respectively. The external surfaces are intact and smooth. The cut surfaces are red-tan. The pelves are unremarkable and the ureters are normal in course and caliber. White bladder mucosa overlies an intact bladder wall. The bladder contains 120 milliliters of clear yellow urine. The prostate gland and testes are unremarkable.

GASTROINTESTINAL TRACT:

The esophagus is intact and lined by smooth, grey-white mucosa. The stomach contains less than 5 milliliters of brown mucous. The stomach, duodenum, loops of small bowel, and colon have diffuse mucosa hemorrhage/decomposition change. The appendix is unremarkable.

MUSCULOSKELETAL:

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

ADDITIONAL PROCEDURES

1. Documentary photographs are taken by OAFME staff photographers.
2. Specimens retained for toxicology testing and/or DNA identification are: Blood, vitreous fluid, bile, liver, lung, kidney, spleen, brain, muscle, urine, adipose tissue and gastric contents.
3. The dissected organs are forwarded with the body. The heart is retained for consultation.
4. Selected portions of organs are retained in formalin.
5. Personal effects are released to the appropriate mortuary operations representatives.
6. Posterior incisions of the skin and subcutaneous soft tissue demonstrate no evidence of injury.

OPINION

This 59 year-old male, **BTB** (b)(6) died of atherosclerotic cardiovascular disease and mitral valve prolapse with annular calcification. Histologic sections of the heart demonstrated a healed myocardial infarction (heart attack). There was no evidence of significant injury. The toxicology screen was negative. At the time of his death, per report, he was being interrogated by a human exploitation team member. The contribution of being interrogated as a precipitating event leading to his death is uncertain. Thus, the manner of death is undetermined.†

(b)(6)

(b)(6) Medical Examiner

(b)(6)

(b)(6) Medical Examiner

† If further information is obtained that requires changing the cause (and manner) of death, an amendment to this report will be made.

ADDENDUM

Cardiovascular Pathology Consultation:

DIAGNOSIS: (b)(6)

1. Focal moderate coronary atherosclerosis
2. Left ventricular hypertrophy with subendocardial and perivascular interstitial fibrosis, and focal healed subendocardial infarct, lateral and posterior left ventricle
3. Mitral valve prolapse with annular calcification

Heart: 515 grams (post-fixation); normal epicardial fat, probe patent foramen ovale; left ventricular hypertrophy: left ventricular cavity diameter 30 mm, left ventricular free wall thickness 14 mm, ventricular septum thickness 16mm; right ventricle thickness 5mm; mitral valve prolapse: thickened and redundant valve leaflets with hooding and annular calcification of posterior leaflet; other valves unremarkable; mild endocardial thickening in left ventricular outflow tract; no gross myocardial fibrosis or necrosis; histologic sections show left ventricular myocyte hypertrophy and subendocardial and perivascular interstitial fibrosis, and focal subendocardial replacement fibrosis in lateral and posterior left walls (healed infarct)

Coronary arteries: Normal ostia; right dominance; focal moderate atherosclerosis: 35% luminal narrowing of proximal left anterior descending artery by pathologic intimal thickening with intimal foam cell infiltrates; 60% narrowing of proximal left circumflex artery by fibroatheromatous and fibrocalcific plaque with adventitial fibrosis and chronic inflammation; 30% narrowing of proximal right coronary artery by pathologic intimal thickening with intimal foam cell infiltrates

CERTIFICATE OF DEATH (OVERSEAS) Acte de décès (D'Outre-Mer)			
NAME OF DECEASED (Last, First, Middle) Nom du décédé (Nom et prénoms) BTB Abdal, Ahmed, Khalaf		GRADE Grade	BRANCH OF SERVICE Arme Civilian
ORGANIZATION Organisation		NATION (e.g. United States) Pays Iraq	SOCIAL SECURITY NUMBER Numéro de l'Assurance Social (b)(6)
		DATE OF BIRTH Date de naissance	SEX Sexe <input checked="" type="checkbox"/> MALE <input type="checkbox"/> FEMALE
RACE Race		MARITAL STATUS État Civil	
<input checked="" type="checkbox"/>	CAUCASOID Caucasique	<input type="checkbox"/>	SINGLE Célibataire
<input type="checkbox"/>	NEGROID Négre	<input type="checkbox"/>	MARRIED Marié
<input type="checkbox"/>	OTHER (Specify) Autre (Spécifier)	<input type="checkbox"/>	WIDOWED Veuf
		<input type="checkbox"/>	DIVORCED Divorcé
		<input type="checkbox"/>	SEPARATED Séparé
		<input type="checkbox"/>	PROTESTANT Protestant
		<input type="checkbox"/>	CATHOLIC Catholique
		<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 Maladie ou condition directement responsable de la mort			Atherosclerotic cardiovascular disease Mitral valve prolapse with annular calcification
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 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		
<input type="checkbox"/>	ACCIDENT Mort accidentelle		
<input type="checkbox"/>	SUICIDE Suicide		
<input type="checkbox"/>	HOMICIDE Homicide		
	MAJOR FINDINGS OF AUTOPSY Conclusions principales de l'autopsie		
	NAME OF PATHOLOGIST Nom du pathologiste (b)(6)	DATE Date 9 January 2007	AVIATION ACCIDENT Accident à Avion <input type="checkbox"/> YES Oui <input checked="" type="checkbox"/> NO Non
DATE OF DEATH (day, month, year) Date du décès (le jour, le mois, l'année) (b)(6) 2007	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 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 dentiste militaire (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 9/5/2007	SIGNATURE Signature (b)(6)		

FORM DD-1 APR 77 2064

REPLACES DA FORM 3885, 1 JAN 72 AND DA FORM 3885-R(PAS), 26 SEP 75, WHICH ARE OBSOLETE.

MEDCOM 0940

(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			

DD FORM 2064, APR 1977 (BACK)

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