ARMED FORCES INSTITUTE OF PATHOLOGY
Office of the Armed Forces Medical Examiner
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Rockville, MD 20850
301-319-0000

AUTOPSY EXAMINATION REPORT

Name: DIAB, Yahiyr Diasti
SSAN: (b)(6)
Date of Birth: Estimate 1950s
Date of Death: (b)(6) 2007
Place of Death: 31st Combat Support Hospital, Camp Cropper, Iraq

Autopsy No.: (b)(6)
AFIP No. (b)(6)
Rank: Detainee

Date and Time of Autopsy: 07 DEC 2007, 1100
Place of Autopsy: Port Mortuary, Dover AFB, DE

Date of Report: 03 MAR 2008

Circumstances of Death: This estimated 50-year-old male, Iraqi detainee was pronounced dead at the intensive care unit of the 31st Combat Support Hospital (CSH) at Camp Cropper, Iraq on (b)(6) 2007. The decedent was admitted to the 31st CSH on 25 November 2007 with complains of vomiting blood and passing tarry stool for approximately three days. He was transferred to the 332 Expeditionary Medical Group in Balad for management of his condition. While at Balad, he had an upper endoscopy procedure with the finding of esophageal varices and underwent banding of the lesion. He was transferred back to the 31st CSH at Camp Cropper on 27 November 2007 for continuing inpatient hospitalization. He was pronounced dead with severe variceal bleeding, liver failure, and severe sepsis.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471

Identification: Presumptive identification by incarceration serial number

CAUSE OF DEATH: Gastrointestinal hemorrhage

MANNER OF DEATH: Natural

On 07 December 2007 at 1100, a complete postmortem examination is performed on the body of (b)(6) who was presumptively identified by his incarceration serial number in theater.

EXTERNAL EXAMINATION

The body is received nude with evidence of medical intervention as noted below. The body is that of a well-developed, well-nourished, adult male and cold from refrigeration. He is 69 inches long, weighs 272 pounds, and appears consistent with an estimated age of 50-years. Rigor mortis is dissipated. Postmortem lividity is fixed on the posterior surface of the body with moderate suffusion of the head and neck.

The head is covered with short black and gray hair in a normal distribution. The irides are brown, corneas are clear, and the sclerae are lightly yellow. The pupils are round and equal in diameter. No contact lenses are present and no conjunctival petechiae are seen. The nose is unremarkable. No foreign material is present in the nostrils or the oral cavity. The lips and frenula are atraumatic. Natural teeth are present with signs of tooth decay and gum disease. The external auditory canals are free of blood. The ears are unremarkable and not pierced. The face has a full beard and mustache.

The neck has no masses or deformities. The chest is symmetric with no increase in the anteroposterior diameter. The abdomen is not distended. The external genitalia are those of a circumcised adult male. The testes are descended and free of masses. There is moderate edema of the penis and scrotum. Pubic hair is present in a normal distribution. The back and buttocks are unremarkable.

The upper and lower extremities are symmetric with evidence of pedal edema. The following scars are present on the legs:

- A ¾ x ⅛-inch scar of the posterior aspect of the left thigh
- A ¾ x ⅛-inch scar of the anterior aspect of the right leg
- A 1 ¼ x ½-inch scar of the anterior aspect of the left leg

CLOTHING AND PERSONAL EFFECT

None

MEDICAL INTERVENTION

- Puncture wounds (x2) covered with gauze, taped in place over the left subclavian area
- Intravenous catheter and arterial catheter inserted and covered with gauze, taped in place over the right femoral area
- Intravenous catheter inserted and covered with gauze, taped in place over the dorsum of the left hand
- Patches of shaved body hair of the right and left chest surfaces
- Puncture with hematoma of the distal right arm

POSTMORTEM ARTIFACTS
None

RADIOGRAPHS
A complete set of total body postmortem radiographs is obtained and shows no evidence of fractures or foreign materials.

EVIDENCE OF INJURY
There is no evidence of blunt or sharp force injuries.

INTERNAL EXAMINATION

BODY CAVITIES:
The body is opened with a standard Y-shaped incision. The abdominal panniculus is 4-cm thick at the umbilicus. The muscles of the chest and abdominal walls are normal. The rib cage, sternum, and clavicles are intact. The mediastinum is unremarkable. The visceral and parietal pleural surfaces are smooth and glistening; however, there are pleural adhesions of the lateral wall and apex of the right lung, and posterior wall of the left lung. There is approximately 100 ml of clear straw-colored fluid in the pericardial sac. The right and left pleural cavities contain 300 ml and 150 ml of clear straw-colored fluid, respectively. The peritoneal cavity has 150 ml of clear straw-colored fluid. The organs occupy their usual anatomic positions within the pleural and peritoneal cavities. There is no evidence of pericarditis or peritonitis. The omentum and retroperitoneum are unremarkable.

NECK:
The larynx and trachea are in the midline. There is no hemorrhage in the skin, fat or sternocleidomastoid muscles of the anterior neck. The strap muscles and large vessels have no abnormalities. The thyroid cartilage and hyoid bone are intact. The larynx has smooth pink-tan mucosa without focal lesions. No foreign material is present. The tongue is free of bite marks, hemorrhage, or other injuries. The soft tissues of the neck are free of hemorrhage. No fractures or dislocations of the cervical vertebrae are detected.

CARDIOVASCULAR SYSTEM:
The 480 gm heart is contained in an intact pericardial sac. The epicardial surface is smooth, with minimal fat investment. There are no epicardial petechiae. The coronary arteries are present in a normal distribution with a right dominant pattern and are unremarkable on multiple cross sections of the vessels. The myocardium is homogenous, dark red-brown, and soft with no gross myocardial fibrosis noted. No defects in the atrial or ventricular septa are present. The valve leaflets are thin and mobile. The circumferences of the cardiac valves are within normal limit for age and heart size. The left ventricle measures 1.8 cm, right ventricle 0.5 cm, and interventricular septum 1.8 cm in thickness. The endocardium is smooth and glistening.

The aorta gives rise to three intact and patent arch vessels. There are atheromatous plaques of the intima of the abdominal aorta. No evidence of aneurysm, coarctation, dissection, or laceration of the aorta is noted. The renal and mesenteric vessels are unremarkable.

RESPIRATORY SYSTEM:
The right and left lungs weigh 1090 and 970 gm, respectively. The trachea is complete, without malformation, from the larynx to the carina. There is no aspirated gastric material or aspirated blood in the trachea. The pleural surfaces are smooth and glistening. The lungs and hilar nodes are moderately anthracotic and there is no gross emphysematous change. On cut section, there is no aspirated blood apparent in alveoli. The pulmonary parenchyma is diffusely edematous. No mass lesions or areas of consolidation are present. There is no pulmonary contusion. Pulmonary thromboemboli are not present.

HEPATOBILIARY SYSTEM:
The 1030 gm liver has a lumpy capsule with a 3-cm scar-like structure of the anterior-superior-lateral aspect of the right lobe. The parenchyma is yellow-tan and has a lobular architecture. No mass lesions or other abnormalities are seen. The gallbladder is present and contains approximately 10 ml of black bile sludge. There is no stone in the gallbladder. The mucosal surface is green and velvety. The extrahepatic biliary tree is patent.

HEMOLYMPHATIC SYSTEM:
The 750 gm intact spleen has a reddish thickened capsule. The parenchyma is deep red, with indistinct Malpighian corpuscles. Autolysis is not significant.

Lymph nodes are not prominent in the cervical region, thoracic or peritoneal cavities.

UROGENITAL SYSTEM:
The right and left kidneys weigh 140 and 290 gm, respectively. The renal capsules strip with ease from the underlying smooth cortical surfaces. The cut surfaces are red-tan, with uniformly thick cortices and sharp corticomedullary junctions. The pelves are unremarkable and the ureters are normal in course and caliber. There are no stones or tumors in the kidneys, pelves, ureters, or bladder. The bladder wall is intact and covered with white mucosa, except for a focal area of hemorrhage of the posterior wall. The bladder contains approximately 15 ml of pinkish-colored 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. There is evidence of banding of the distal esophageal mucosa at the region of the gastroesophageal junction. The stomach contains approximately 500 ml of blood and blood clots. The gastric wall is intact. The small and large intestines are intact and full of liquid blood. The appendix is present. There is blood oozing at the anus.

On further examination after formalin fixation of the proximal stomach and distal esophagus, there is an ovoid 2 x 0.5-cm erosion-like, vertically oriented, lesion of the distal esophageal mucosa. The lower edge of this lesion is encroaching on the gastroesophageal junction. Approximately 0.5 cm distal from the lower edge of this lesion is a 1.5 x 0.7-cm erosion of the gastroesophageal junction mucosa within which a 0.5-cm elastic banded stump is present.

ENDOCRINE SYSTEM:
The thyroid gland is normal in size and symmetric with dark red-brown parenchyma. No masses are present.

The right and left adrenal glands are symmetric, with bright yellow cortices and grey medullae. No masses or areas of hemorrhage are identified. Autolysis is not significant.

PANCREAS:
The pancreas is firm and yellow-tan, with the usual lobular architecture. No mass lesions or other abnormalities are seen. Autolysis is not significant.

MUSCULOSKELETAL SYSTEM:
The vertebral column and pelvis are visibly and palpably intact. The musculature is normally developed and of the usual color and consistency. The back and posterior aspect of the lower extremities are incised with two continuous incisions from the shoulder to the ankles and shows no evidence of injuries.

HEAD AND CENTRAL NERVOUS SYSTEM:
The cranial cavity is opened with a coronal incision of the scalp and removal of the calvarium. The galeal and subgaleal soft tissues of the scalp are free of injury. The calvarium is intact, as is the dura mater beneath it. There is no evidence of epidural, subdural, or subarachnoid hemorrhage. The brain weighs 1480 gm. The leptomeninges are transparent and strip with ease. The gyral pattern and sulci are unremarkable. The major vessels at the base of the brain have the usual anatomic distribution and no significant atherosclerosis is found. The cranial nerves are symmetrical and intact. No evidence of herniation is present. Coronal sections through the cerebral hemispheres reveal no lesions. The ventricles are of normal size and contain clear cerebrospinal fluid. Transverse sections through the brain stem and cerebellum are unremarkable. There are no skull fractures. The atlanto-occipital joint is stable. The spinal cord is not examined in its entirety.

OTHER PROCEDURES

1. Photographic evidence is obtained by OAFME photographers.
2. Specimens for toxicology: blood, bile, vitreous, urine, liver tissue, kidney tissue, lung tissue, spleen tissue, brain tissue, heart tissue, and adipose tissue.
3. Specimen collected for DNA analysis: psoas muscle.
4. Representative tissue samples are retained in formalin, with preparation of histologic slides.
5. Dissected organs are forwarded with the body.

MICROSCOPIC EXAMINATION

Lungs (slide 1 -5): diffuse pulmonary edema with emphysematous change and no evidence of increase inflammatory cells infiltrate. There are scattered foci of microscopic calcification within the parenchyma and diffuse anthracotic deposition.

Kidneys (slide 8): tubular autolysis with scattered glomerulosclerosis. A focal fibrosis is seen in the medulla.

Spleen (slide 9 – 11): congestion with increase fibrosis of the red pulp areas. White pulp is present with unremarkable periarteriolar lymphatic sheath.

Esophageal defect (slide 12 – 14): denuded squamous epithelium with coagulative necrotic changes and early replacement fibrosis. There are numerous dilated vascular spaces in the submucosal tissue with some of them containing early organizing thrombi. There is no evidence of acute rupture of the blood vessels in this area.

Consultation

Liver: Hepatoportal sclerosis

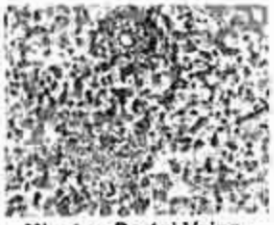
The liver is extremely autolyzed. Changes are best appreciated on the Masson stains.

There is considerable parenchymal atrophy, causing the vascular structures (portal tracts and central veins) to be close together and wrinkling of the Glisson's capsule in section 7. There is no cirrhosis, but there is a great deal of portal fibrosis with portal-portal bridging. Hepatic artery branches are present in the portal tracts, but many small portal tracts have only small portal vein branches or lack portal veins entirely. Several large portal areas have veins that are markedly thickened by intimal proliferation, presumably secondary to the patient's portal hypertension. A few outflow veins are also thickened. The features are those of the uncommon disorder known variably as "hepatoportal sclerosis", "idiopathic portal hypertension", or "noncirrhotic portal fibrosis". The cause and pathogenesis are uncertain, but patients with this disease can develop severe portal hypertension in the absence of cirrhosis. See attached pictures.

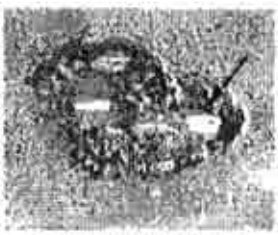

Atrophic Liver


Wrinkled Capsule


Small Portal Vein Branch


Missing Portal Veins

Thickened Large Portal Vein - Arrows show original vein wall.



Recanalized Large Portal Vein

Portal & Bridging Fibrosis

References:

1. Aikat BK, et al: The pathology of noncirrhotic portal fibrosis. Human Pathol1979; 10:405-418
2. Okuda K, et al: Liver pathology of idiopathic portal hypertension. Comparison with non-cirrhotic portal fibrosis of India. Liver 1982; 2:176-192.
3. Bioulac-Sage P, et al: Hepatoportal sclerosis. Sem Liver Dis 1995; 15:329-339.
4. Nakanuma Y, et al: Pathology and pathogenesis of idiopathic portal hypertension with an emphasis on the liver. Pathol Res Pract 2001; 197:65-76.
5. Fiel MI, et al: Liver failure and need for transplantation in patients with advanced hepatoportal sclerosis. Am J Surg Pathol 2007; 31:607-614.

//SIGNED//
(b)(6)

Armed Forces Institute of Pathology

FINAL AUTOPSY DIAGNOSES:

I. Gastrointestinal hemorrhage
- A. Hepatoportal sclerosis
- B. Status post banding for esophageal varices
- C. Approximately 500 ml of blood and blood clot collected in the stomach
- D. Intestinal lumen is filled with blood with discharge of blood via the anus

II. Other natural disease diagnoses
- A. Concentric left ventricular hypertrophy
- B. Microscopic finding of diffuse enlarged portal fibrosis of the liver
- C. Splenomegaly (750 gm)
- D. Asymmetrical kidneys (right – 140 gm, left -290 gm)
- E. Pericardial, pleural, and peritoneal effusions
- F. Pedal and scrotal edema

III. Medical therapy
- A. Intravenous catheter inserted and covered with gauze of the left subclavian area
- B. Arterial catheter and intravenous catheter inserted and covered with gauze of the right femoral area
- C. Intravenous catheter inserted and covered with gauze of the left hand
- D. Puncture wound with hematoma of the right arm

IV. Identifying marks
- A. Scar of the posterior aspect of the right thigh
- B. Scars of the anterior aspects of both legs

V. Toxicology results
- A. No ethanol detected in the blood and vitreous fluid
- B. Drug screen
  - a. Lidocaine detected in the urine
  - b. Morphine detected in the urine. The blood contained 0.11 mg/L
  - c. Acetaminophen detected in the urine. The blood contained 5 mg/L
  - d. Midazolam detected in the urine. The blood contained 0.34 mg/L
  - e. 1-Hydorxymidazolam detected in the urine. The blood contained 0.025 mg/L

OPINION

This estimated 50-year-old male died as a result of acute upper gastrointestinal hemorrhage from esophageal variceal bleeding.

The banding of the esophageal varices was in place. The lesion of the distal esophagus was consistent with that of a healing erosion above the banded esophageal varice. Although we did not find the source of the bleeding, re-bleeding is a known complication with high mortality of the esophageal varices. Esophageal varices develop in 90% of cirrhotic patients and are most often associated with alcoholic cirrhosis. Worldwide, hepatic schistosomiasis is the second most common cause of variceal bleeding. The decedent's liver showed characteristic of an uncommon disorder known as hepatoportal sclerosis as indicated from the AFIP consultation. As such, patients with this disorder were known to develop severe portal hypertension, and ultimately gastroesophageal varices.

The postmortem toxicology analysis showed the present of lidocaine, morphine, acetaminophen, midazolam, and 1-hydroxymidazolam (a byproduct of midazolam) consistent with medical therapeutic modalities.

We had requested the complete medical record for the time of his hospitalization from 25 November 2007 to the time of his death on (b)(6) 2007; however, received only the documentation for the admission, brief surgical note of the esophageal banding, and the brief note of death notification. The progress notes for his hospitalization were absent for our review. Therefore, we are certifying the cause and manner of death based on the available medical record, autopsy, and toxicology findings. If there is additional material becomes available, we will review the case and issue our finding if warranted.

The manner of death is natural.

(b)(6)

(b)(6) Medical Examiner

(b)(6)

(b)(6) Medical Examiner

CERTIFICATE OF DEATH *(OVERSEAS)*
Acte de décès (D'Outre-Mer)

NAME OF DECEASED (Last, First, Middle) Nom du décédé (nom et prénoms)	GRADE Grade	BRANCH OF SERVICE Arme	SOCIAL SECURITY NUMBER
BTB Diab, Yahiyr, Diasti		Civilian	(b)(6)

ORGANIZATION Organisation	NATION (e.g. United States) Pays	DATE OF BIRTH Date de naissance	SEX Sexe
			[X] MALE [ ] FEMALE

RACE Race		MARITAL STATUS État Civil			RELIGION Culte	
X	CAUCASOID Caucasique	SINGLE Célibataire	DIVORCED Divorcé		PROTESTANT Protestant	OTHER (Specify) Autre (Spécifier)
	NEGROID Négroïde	MARRIED Marié	SEPARATED Séparé		CATHOLIC Catholique	X
	OTHER (Specify) Autre (Spécifier)	WIDOWED Veuf			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	Gastrointestinal hemorrhage	
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 première		
OTHER SIGNIFICANT CONDITIONS Autres conditions significatives		

MODE OF DEATH Condition de décès

X	NATURAL Mort naturelle
	ACCIDENT Mort accidentelle
	SUICIDE Suicide
	HOMICIDE Homicide

AUTOPSY PERFORMED Autopsie effectuée [X] YES Oui [ ] NO Non

MAJOR FINDINGS OF AUTOPSY Conclusions principales de l'autopsie

NAME OF PATHOLOGIST Nom du pathologiste: (b)(6)

(b)(6)

DATE Date: 7 December 2007

CIRCUMSTANCES SURROUNDING DEATH DUE TO EXTERNAL CAUSES Circonstances de la mort suscitées par des causes extérieures

WHAT ON ACCIDENT Accident à Action [ ] YES Oui [X] NO Non

DATE OF DEATH (Day, month, year) (Jour, le mois, l'année): (b)(6) (b)(6) 2007 (b)(6)

PLACE OF DEATH Lieu du décès: Camp Cropper 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 constaté les restes mortels du dit défunt je conclus que le décès est survenu à l'heure indiquée et à la suite des causes énumérées ci-dessus.

(b)(6)

TITLE Titre du diplômé: Medical Examiner

GRADE Grade: MAJ

INSTALLATION OR ADDRESS Installation ou adresse: Dover AFB, Dover DE

DATE Date: 12/7/2007

SIGNATURE: (b)(6)

DD FORM 1 APR 77 2064 REPLACES DA FORM 3565, 1 JAN 72 AND DA FORM 3565-R (FA), 28 SEP 73, WHICH ARE OBSOLETE.

MEDCOM 0720

(REMOVE, REVERSE AND RE-INSERT CARBONS BEFORE COMPLETING THIS SIDE)

DISPOSITON OF REMAINS

NAME OF MORTICIAN PREPARING REMAINS	GRADE	LICENSE NUMBER AND STATE	OTHER

INSTALLATION OR ADDRESS	DATE	SIGNATURE
(b)(6)		

NAME OF CEMETERY OR CREMATORY	LOCATION OF CEMETERY OR CREMATORY

TYPE OF DISPOSTION	DATE OF DISPOSTION

REGISTRATION OF VITAL STATISTICS

REGISTRY *(Town and County)*	DATE REGISTERED	FILE NUMBER	
		STATE	OTHER

NAME OF FUNERAL DIRECTOR	ADDRESS

SIGNATURE OF AUTHORIZED INDIVIDUAL

DD FORM 2064, APR 1977 (BACK) *USAPA V1.00*