



ARMED FORCES INSTITUTE OF PATHOLOGY
Office of the Armed Forces Medical Examiner
 1413 Research Blvd., Bldg. 102
 Rockville, MD 20850
 301-319-0000



AUTOPSY EXAMINATION REPORT

Name: (BTB) HASAN, Mahmud Rashid
 ISN: (b)(6)
 Date of Birth: (RTR) (b)(6) 1967
 Date of Death: (b)(6) 2008
 Date/Time of Autopsy: 5 AUG 2008 @ 1315 hrs
 Date of Report: 10 OCT 2008

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

Circumstances of Death: This 41-year-old detainee was admitted to the combat hospital ICU complaining of weakness, nausea, and headaches. He was initially diagnosed with pneumonia and was treated with antibiotics. His condition continued to decline and he progressed into a coma. The preliminary diagnosis for his condition was lung cancer with brain metastasis. He was pronounced dead on (b)(6) 2008.

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

Identification: Presumptive identification per CID investigation.

CAUSE OF DEATH: METASTATIC CARCINOMA

MANNER OF DEATH: NATURAL

EXTERNAL EXAMINATION

The body is that of a well-developed, well-nourished nude male. The body weighs 126 pounds, measures 67 inches in length, and appears compatible with the reported age of 41 years. The body is cold. Rigor is present to an equal degree in all extremities. Lividity is present and fixed on the posterior surface of the body, except in areas exposed to pressure.

The head is normocephalic, and the scalp hair is black/grey. Facial hair consists of black/grey mustache and beard. The irides are brown. The corneae are cloudy. The conjunctivae and sclerae are unremarkable. The external auditory canals, external nares and oral cavity are free of foreign material and abnormal secretions. The nasal skeleton and maxilla are palpably intact. The lips are without evident injury. There are lower partial dentures and the upper teeth are natural. Examination of the neck reveals no evidence of injury.

The chest is unremarkable. No evidence of injury of the ribs or the sternum is evident externally. The abdomen is unremarkable. No healed surgical scars are noted. The external genitalia are those of an adult male. The posterior torso and anus are unremarkable.

Callous formation is present on the base of the feet. The fingernails are intact.

CLOTHING AND PERSONAL EFFECTS

None identified.

MEDICAL INTERVENTION

- EKG leads on left lateral arm and left lower abdominal quadrant
- Numerous needle puncture marks surrounded by contusions measuring up to 2 ½ inches in maximum dimension involving the bilateral antecubital fossae, bilateral anterior forearms, and anterior right wrist

RADIOGRAPHS

A complete set of postmortem radiographs is obtained and demonstrates the following abnormalities listed below.

EVIDENCE OF INJURY

None identified at autopsy.

INTERNAL EXAMINATION

BODY CAVITIES:

No 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 2 inches thick.

HEAD (CENTRAL NERVOUS SYSTEM) AND NECK:

See "Neuropathology Consultation" Report below. The galeal and subgaleal soft tissues of the scalp are free of injury. There are no skull fractures. The dura mater and falx cerebri are intact. 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.

The brain weighs 1450 grams and has edematous gyri and sulci. The atlanto-occipital joint is stable. The anterior strap muscles of the neck are homogenous and red-brown, without hemorrhage by layer-wise dissection. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact tan mucosa. The tongue is free of bite marks, hemorrhage, or other injuries. Incision and dissection of the posterior neck demonstrates no deep paracervical muscular injury and no cervical spine fractures.

CARDIOVASCULAR SYSTEM:

The 360gram 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. Cross sections of the vessels show mild (less than 25%) focal atherosclerotic luminal stenosis of the left anterior descending coronary artery and the others are unremarkable.

The myocardium is homogenous, red-brown, and firm. The valve leaflets are thin and mobile. The walls of the left ventricle, interventricular septum, and right ventricle are 1.2, 0.8, and 0.2 centimeter thick, respectively. The endocardium is smooth and glistening. The aorta displays atherosclerotic streaks and gives rise to three intact and patent arch vessels. The renal and mesenteric vessels are unremarkable.

RESPIRATORY SYSTEM:

The upper airway is clear of debris and foreign material: the mucosal surfaces are smooth, yellow-tan and unremarkable. There is a right upper lobe pleural adhesion and the remaining surface showing a smooth, glistening appearance. The pulmonary parenchyma displays multiple tan lesions measuring up to 0.7 centimeters in maximum dimension involving the right upper, left upper, and left lower lobes of the lungs. The pulmonary arteries are normally developed, patent and without thrombus or embolus. The right lung weighs 780grams and the left lung weighs 650 grams.

HEPATOBIILIARY SYSTEM:

The 1520 grams liver has an intact smooth capsule covering moderately congested tan-brown parenchyma with multiple tan lesions measuring up to 1 centimeter in maximum dimension.

The gallbladder contains 6 milliliters of green-brown, mucoid bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi.

GASTROINTESTINAL SYSTEM:

The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds and the lumen contains 150 milliliters of green fluid. The small and large bowels are unremarkable. The pancreas has a normal pink-tan lobulated appearance and the ducts are clear. The appendix is present.

GENITOURINARY SYSTEM:

The right and left kidneys weighs 90 grams. The renal capsules are smooth and thin, semi-transparent and strip with ease from the underlying smooth, red-brown cortical surface. There are multiple tan lesions in both kidneys which measure up to 1 centimeter in maximum dimension. The cortices are sharply delineated from the medullary pyramids, which are red-purple to tan and unremarkable. The calyces, pelves and ureters are unremarkable. The tan bladder mucosa overlies an intact bladder wall. The bladder contains no urine. The testes, prostate gland and seminal vesicles are unremarkable.

LYMPHORETICULAR SYSTEM:

The spleen weighs 50 grams has a smooth, intact capsule covering red-purple, moderately firm parenchyma; the lymphoid follicles are unremarkable. Lymph nodes in the hilar, periaortic and iliac regions are not enlarged.

ENDOCRINE SYSTEM:

The pituitary gland is left *in situ* and is unremarkable. The thyroid gland is symmetric and red-brown, without cystic or nodular change. The left adrenal gland has a tan lesion that measures 0.8 centimeter in maximum dimension. The right adrenal gland is unremarkable.

MUSCULOSKELETAL SYSTEM:

No non-traumatic abnormalities of muscle or bone are identified.

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, with preparation of histology slides:

Right Upper Lobe (slide 1), Right Middle and Lower lobes of lung (slide 2), Liver (slide 3), left lower lobe of lung (slide 4), left upper lobe and spleen (slide 5), left kidney (slide 6), left adrenal (slide 7), and right kidney (slide 8): sections of the organs display areas of metastatic carcinoma with pleomorphic nuclei admixed with necrosis. The spleen and right middle/left lower lobes of the lung displayed on metastatic involvement.

ADDITIONAL PROCEDURES

1. Documentary photographs are taken by OAFME.
2. Personal effects are released to the appropriate mortuary operations representatives.
3. Specimens retained for toxicology testing and/or DNA identification are: vitreous fluid, blood, bile, gastric contents, spleen, liver, lung, kidney, myocardium, adipose tissue and skeletal muscle.
4. The dissected organs are forwarded with body.

NEUROPATHOLOGY CONSULTATION

FINAL DIAGNOSIS

GROSS DESCRIPTION:

Brain weight: 1437 gm

The specimen consists of the intracranial dura and brain of an adult.

The intracranial dura is not remarkable. The venous sinuses are patent.

The brain is markedly swollen with wide, flattened gyri and compressed sulci. The perisellar, perimesencephalic and basal cisterns are completely effaced due to swelling. Deep tentorial grooves indent each uncus approximately 1 cm from the medial margin on the right and 0.8 cm on the left due to downward transtentorial pressure. The cerebellar tonsils are deeply molded by the foramen magnum due to downward transtentorial pressure. A regional nonhemorrhagic (artefactual) disruption of a 4 x 4.5 cm area of the right lateral parietal lobe communicates with an approximately 5 x 5 x 4.5 cm cavity of the right posterior/inferior frontal and anterior occipital lobe white matter. Accompanying the brain is a firm, friable, 4.5 x 5 x 4 cm pink-tan neoplastic mass consistent with metastatic neoplasm, with diffuse necrotic, granular yellow-white cut surfaces which has been artifactually extruded from the above noted right frontal occipital cerebral cavity.

The leptomeninges are thin, delicate and transparent. The midbrain and pons are markedly enlarged. The arteries at the base of the brain follow a normal distribution and there are no aneurysmal dilatations or sites of occlusion. All the identifiable cranial nerve roots are not remarkable.

Coronal sections of the cerebrum reveal marked white matter edema and swelling of the right frontal lobe associated with the above noted neoplasm with effacement of the

gray/white matter margins and right trans-falcine cingulate gyrus herniation due to leftward pressure across the falx cerebri. The adjacent right lateral ventricle is partially collapsed and the opposite left ventricle is enlarged reflecting partial compression of the left foramen of Munro.

A second granular friable mass (3.5 x 4 x 3.5 cm), similar to the above described lesion is situated in the posterior-inferior right frontal lobe and invades the lateral basal ganglia and the sub-insular cortex.

There is multifocal hemorrhage and necrosis of the right inferior thalamus and the bilateral subependymal areas of each thalamus. A 0.3 to 0.5 cm thick layer of granular, friable neoplastic tissue similar to the above lesions encases the occipital horn of the left lateral ventricle.

Sections of the midbrain and pons show marked swelling due to tegmental Duret hemorrhages and necrosis. The tegmentum of the medulla is edematous. The substantia nigra and locus coeruleus are well pigmented.

PHOTOGRAPHS: yes

MICROSCOPIC EXAMINATION:

Blocks of tissue for microscopic examination are removed from: (1) right lateral frontal lobe, (2) right striate body, (3) right insular tumor, (4) right lateral parietal lobe, (5) external tumor, (6) pons, (7) cerebellum, (8) left occipital lobe, (9) medulla, (10) dura and (11) right hippocampus.

Sections from each block are stained with H&E, Bielschowsky and LFB techniques and immunostained for β -APP, GFAP, β -amyloid, Tau-2, ubiquitin, synuclein.

DIAGNOSIS:

Multifocal (right frontal, right parietal/occipital, left occipital) metastatic, anaplastic, necrotic carcinoma with:

1. Extensive perineoplastic edema
2. Trans-falcine (leftward), trans-tentorial and trans foramen magnum herniation
3. Duret hemorrhage of midbrain and rostral pons tegmentum.
4. Partial obstruction of left foramen of Munro

(b)(6)

NEUROPATHOLOGIST

FINAL AUTOPSY DIAGNOSES

- I. Metastatic Carcinoma**
 - A. Multifocal (right frontal, right parietal/occipital, left occipital) lesions of the brain
 - B. Carcinoma with pleomorphic nuclei admixed with necrosis
 - C. Extensive perineoplastic edema
 - D. Trans-falcine (leftward), trans-tentorial and trans-foramen magnum herniation
 - E. Duret hemorrhage of midbrain and rostral pons tegmentum
 - F. Partial obstruction of left foramen of Munro
 - G. Tumor involvement of the bilateral lungs, left adrenal gland, liver, and kidneys
- II. Pre-existing Natural Disease:**
 - A. Bilateral emphysematous lungs
 - B. Atherosclerotic cardiovascular disease
 - 1. Left anterior deceasing, focal/mild
 - 2. Aorta, atherosclerotic streaks present
- III. Evidence of Medical Therapy:** As described above
- IV. Post-Mortem Changes:** As described above
- V. Identifying Body Marks:** None identified
- 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. CYANIDE: No cyanide detected in the blood
 - D. CARBON MONOXIDE: Carboxyhemoglobin saturation in the blood was less than 1%.

OPINION

This 41-year-old detainee (b)(6) died of clinically diagnosed lung cancer which spread (metastasized) to the brain, left adrenal gland, liver, and kidneys. The primary tumor was not identified in the lungs. However, the metastasized tumors were of the adenocarcinoma type which is consistent with occult lung tumor. At autopsy, the body did not display evidence of blunt or sharp force injury to suggest foul play. The toxicology screen is negative. The manner of death is natural.

(b)(6)

(b)(6) Medical Examiner

(b)(6)

(b)(6) Medical Examiner

(b)(6)

CERTIFICATE OF DEATH (OVERSEAS) Acte de décès (D'Outre-Mer)			
NAME OF DECEASED (Last, First, Middle) Nom du décédé (Nom et prénoms) BTB Hasan, Mahmud, Rashid		GRADE Grade	BRANCH OF SERVICE Arme Civilian
ORGANIZATION Organisation		NATION (e.g. United States) Pays Iraq	DATE OF BIRTH Date de naissance (b)(6) 1967
		SOCIAL SECURITY NUMBER Numéro de l'Assurance Social (b)(6)	
		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"/>	NEGRÖID 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
		RELIGION Culte	
		<input type="checkbox"/> PROTESTANT Protestant	
		<input type="checkbox"/> CATHOLIC Catholique	
		<input type="checkbox"/> JEWISH Juif	
		<input checked="" type="checkbox"/> OTHER (Specify) Autre (Spécifier) Islam	
NAME OF NEXT OF KIN Nom du plus proche parent		RELATIONSHIP TO DECEASED Parenté du décès 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 Metastatic carcinoma			
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	MAJOR FINDINGS OF AUTOPSY Conclusions principales de l'autopsie		
<input type="checkbox"/> ACCIDENT Mort accidentelle			
<input type="checkbox"/> SUICIDE Suicide	NAME OF PATHOLOGIST Nom du pathologiste (b)(6)		
<input type="checkbox"/> HOMICIDE Homicide	SIGNATURE (b)(6)	DATE 5 August 2008	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)(6) 2008 1605	PLACE OF DEATH Lieu de 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 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)		TITLE OR DEGREE Titre ou diplôme Medical Examiner	
GRADE Grade (b)(6)	INSTALLATION OR ADDRESS Installation ou adresse Dover AFB, Dover DE		
DATE Date 10/24/2008	SIGNATURE (b)(6)		
<small>1. State disease, injury or complication which caused death, but not mode of dying such as heart failure, ect. 2. State conditions contributing to the death, but not related to the disease or condition causing death. 3. 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. 4. Préciser les conditions qui ont contribué à la mort, mais n'évitant aucun rapport avec la maladie ou la condition qui a provoqué la mort.</small>			

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REPLACES DA FORM 3865, 1 JAN 72 AND DA FORM 3865-R(PAS), 26 SEP 75, WHICH ARE OBSOLETE.

MEDCOM 1066

(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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