



ARMED FORCES INSTITUTE OF PATHOLOGY
Office of the Armed Forces Medical Examiner
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AUTOPSY EXAMINATION REPORT

Name:
SSAN:
Date of Birth: unknown
Date of Death: 13 June 2003
Date of Autopsy: 17 June 2003
Date of Report: 11 May 2004

Autopsy No.: ME03-273
AFIP No.: 2882655
Rank: Civilian, Iraqi national
Place of Death: Iraq
Place of Autopsy: Baghdad
International Airport, Baghdad, Iraq

Circumstances of Death: This approximately 45 year-old civilian Iraq male detainee died in U.S. custody approximately 12 hours after a reported escape attempt by the decedent. Physical force was required to subdue the detainee, and during the restraining process, his forehead hit the ground.

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

Identification: Visual; Fingerprints and DNA samples obtained

CAUSE OF DEATH: Closed Head Injury with a Cortical Brain Contusion and Subdural Hematoma

MANNER OF DEATH: Homicide

FINAL AUTOPSY DIAGNOSES:

- I. Closed Head Injury
 - a. Subarachnoid hemorrhage over brain
 - b. Cortical brain contusion, right occipital region, 4 x 4 x 3 cm
 - i. Intracortical hemorrhage with fresh erythrocytes, fibrin, and polymorphonuclear leukocytes
 - ii. Negative for fibroblasts, macrophages, capillary proliferation, hemosiderin or iron
 - c. Right subdural hematoma, 20 ml
 - i. Fresh erythrocytes, fibrin, and polymorphonuclear leukocytes
 - ii. Negative for fibroblasts, macrophages, capillary proliferation, hemosiderin or iron
 - d. No skull fractures
 - e. Left frontal subgaleal hemorrhage with scalp laceration
 - i. Status post suturing of laceration

- II. Additional Injuries
 - a. Fracture right lateral 8th rib with soft tissue hemorrhage
 - b. Multiple contusions, abrasions, and minor lacerations of head, torso, and extremities
 - c. Abrasions and contusions around wrists and ankles, consistent with restraint
 - d. Hemorrhage of right sternocleidomastoid muscle of neck
 - i. Hyoid bone intact without hemorrhage or fracture

- III. No evidence of natural disease within the limitations of the examination

- IV. Toxicology: AFIP
 - a. Volatiles: Blood and urine negative for ethanol
 - b. Drugs: Urine positive for lidocaine; negative for all other screened medications and drugs of abuse

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EXTERNAL EXAMINATION

The body is that of a well developed, well nourished unclad adult male, received in a black body bag labeled with a tag (b)(6)-4. The body weighs approximately 150 lbs, is 66" in height and appears compatible with the reported age of approximately 45 years. The body temperature is that of the refrigeration unit. 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 scalp is covered with black hair averaging 2 cm in length. There is a black mustache and black facial stubble. The irides are brown, and the cornea are clear. The sclerae and conjunctivae are pale and free of petechiae. The earlobes are not pierced. The external auditory canals and external nares are free of foreign material and abnormal secretions. The nasal skeleton is palpably intact. The lips are without evident injury. There is bloody fluid within the mouth, but no injuries are identified within the oral cavity. The teeth are natural and in good condition. Below the chin is a 1.5 cm well healed linear scar.

The neck is straight and the trachea is midline and mobile. The chest is symmetric and well developed. The abdomen is flat and soft. The extremities are well developed with normal range of motion. The fingernails are intact. No tattoos are evident. The external genitalia are those of a normal adult circumcised male. The testes are descended and free of masses. Pubic hair is present in a normal distribution. The buttocks and anus are unremarkable.

CLOTHING AND PERSONAL EFFECTS

No clothing items or personal effects are present on the body at the time of autopsy.

EVIDENCE OF THERAPY

There is an endotracheal tube appropriately placed. There is white tape with gauze in both antecubital fossae, overlying needle puncture marks and associated ecchymoses. There are needle puncture marks with associated ecchymoses on the upper anterior forearm. There are three EKG adhesive pads, two on the upper chest and one on the mid abdomen. There are three stitches placed in a laceration of the left forehead. In the left inguinal region, there is a 1 cm incised wound, consistent with a venous access attempt.

EVIDENCE OF INJURY

The ordering of the following injuries is for descriptive purposes only and is not intended to imply order of infliction or relative severity.

Head and Neck:

On the upper midline of the forehead, just below the hairline is a horizontally oriented 4 x 2 cm abrasion. On the upper left aspect of the forehead, there is a 1.5 cm previously sutured incision with a surrounding 3 x 2 cm abrasion. On the upper right aspect of the

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forehead, there is a 3 x 2 cm abrasion. At the right lateral edge of the right eye, extending up to the eyebrow and laterally along the orbital ridge, there is a 6 x 5 cm red contusion with focal abrasion along the bony prominence. On the right cheek, there is a central horizontally oriented 3 x 1 cm red contusion. On the upper lateral aspect of the left cheek, there is a horizontally oriented 3 x 1.5 cm abrasion. On the lower medial aspect of the right cheek, there are two 0.3 cm abrasions.

Above the left ear, at the crease between the pinna and the scalp, there is a 1 cm laceration. Behind the left ear, there is a 3 x 2 cm purple contusion. On the left lateral aspect of the neck, extending from behind the left ear anteriorly along the edge of the mandible, there is a 15 x 13 cm red contusion. Behind the right ear, there is diffuse erythema of the posterior aspect of the pinna and a 4 x 3 cm dark contusion. On the right lateral aspect of the neck, extending from behind the right ear anteriorly along the edge of the mandible, there is a 14 x 10 cm area with multiple small curvilinear abrasions and contusions, up to 0.5 cm in length. On the left anterior aspect of the neck, there is a diagonal 13 x 1.5 cm linear abrasion.

Across the back of the neck, there is a 25 x 10 cm area of diffuse erythema. Within this area, on the right lateral aspect of the neck, there are three horizontally oriented linear abrasions; a 2 x 2 cm superior abrasion, a mid 3 x 2 cm abrasion, and a 3 x 1 cm lower abrasion.

Upon reflection of the scalp, there is a 3 x 2 cm area of subgaleal hemorrhage of the left frontal region, surrounding the laceration. Upon removal of the calvarium, there is approximately 20 ml of clotted but soft and non-adherent subdural hemorrhage over the right side of the brain. There is diffuse subarachnoid hemorrhage over the brain. Serial sectioning of the brain reveals a 4 x 4 x 3 cm area of intracortical brain hemorrhage in the right occipital brain.

On internal examination of the neck, there is diffuse hemorrhage of the right sternocleidomastoid muscle. However, there is no hemorrhage of the anterior strap muscles of the neck, and the hyoid bone is intact and free of hemorrhage.

Chest and Abdomen:

On the anterior and lateral aspect of the right shoulder, there is a 10 x 13 cm irregular area of abrasion. Over the right clavicle, there are two diagonal 7 x 0.3 cm linear abrasions. Just below the left clavicle, there is a 4 x 2 cm irregular abrasion. On the anterior left shoulder, there is a 3 x 3 cm red contusion.

Over the mid chest, there is a 30 x 20 cm area of mottled erythema and red contusion. Within this area, over the sternum, there is a 7 x 5 cm red abrasion with focal linearity. On the lower left aspect of the chest, there is a diagonal 7 x 0.2 cm linear abrasion.

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On the mid abdomen, just above the umbilicus, there is a healing 5 x 0.1 cm abrasion. On the lower abdomen, just to the right of midline, there is a 1.5 x 1 cm abrasion. On the lower left abdomen, there is a 1.5 x 1 cm abrasion.

On internal examination of the chest, there is a fracture of the lateral aspect of the right 8th rib with associated soft tissue hemorrhage.

Back:

Across the upper back, there is a horizontal 45 x 5 cm linear red contusion. At the left lateral edge of this band, there is a 4 x 2 cm abrasion on the posterior aspect of the shoulder. On the left lateral aspect of the upper back, there are two linear abrasions, 2 x 0.2 cm each.

Upper Extremities:

On the lower anterior aspect of the right upper arm, there are two linear abrasions, 2 x 0.2 cm each. On the back of the right elbow, there is a 9 x 4 cm red contusion.

Around the right wrist, there is a complex nearly circumferential abrasion. On the radial aspect (base of the thumb) of the wrist, there is a 4 x 8 cm abrasion. On the ulnar aspect (below the 5th finger) of the wrist, there is a 5 x 1.5 cm abrasion. Connecting these two abrasions and extending around the palmar aspect of the wrist are two linear bands of contusion with focal abrasion, 0.5 cm in width each. On the back of the right hand, below the 4th and 5th fingers, there is a diagonal 3 x 0.2 cm abrasion and a 3 x 0.1 cm abrasion.

On the lower anterior aspect of the left upper arm, there is a 1 x 1 cm abrasion. On the back of the left elbow, there is an 8 x 7 cm red purple contusion. On the anterior mid left forearm, there is a 1 x 1 cm abrasion.

Around the left wrist, there is nearly circumferential contusion. On the radial aspect (base of the thumb) of the wrist, there is a 3 x 4 cm abrasion. On the ulnar aspect (below the 5th finger) of the wrist, there is a 4 x 4 cm abrasion. Connecting these two abrasions, extending around the dorsal aspect of the wrist are two linear bands of contusion with focal abrasion, 0.3 cm in width each.

Lower Extremities:

On the anterior medial aspect of the mid right thigh, there is a 3 x 3 cm triangular shaped abrasion. On the anterior aspect of the lower right thigh, just above the knee, there is a 1 x 1 cm abrasion and a medial 7 x 5 cm red contusion. On the medial aspect of the knee there is a 1 x 1 cm abrasion. Just below the right knee, there is a 2 x 2 cm abrasion. Over the right popliteal fossa (back of the knee), there is a 15 x 10 cm red contusion.

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Extending down the anterior aspect of the right lower leg, there is a vertically oriented 20 x 5 cm red contusion. Around the right ankle is a circumferential abrasion, ranging in width from 1 to 1.5 cm.

Just above the left knee, there is a 5 x 4 cm red contusion. On the lateral aspect of the left knee, there are three 1 cm abrasions, and on the lower mid aspect of the knee, there is a 3 x 2 cm abrasion. Just below the knee, there is a 2 x 1 cm abrasion. Over the left popliteal fossa (back of the knee), there is a 15 x 5 cm red contusion with a 3 x 4 cm abrasion at the lower edge.

Extending down the anterior aspect of the left lower leg, there is a vertically oriented 17 x 5 cm red contusion. Around the left ankle, there are two circumferential abrasions, 1 cm in width each and 1 cm apart. On the medial aspect of the left ankle, there is a 1 x 1.5 cm abrasion.

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 the normal anatomical position. The vertebral bodies are visibly and palpably intact. The subcutaneous fat layer of the abdominal wall is 3 cm thick. There is no internal evidence of blunt force or penetrating injury to the thoraco-abdominal region.

HEAD: (CENTRAL NERVOUS SYSTEM)

The head has the previously described injuries. The scalp is reflected, and there are no skull fractures found. The calvarium of the skull is removed. The dura mater and falx cerebri are intact. There is no epidural 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. Coronal sections through the cerebral hemispheres reveal no evidence of infection or tumor. The ventricles are of normal size. Transverse sections through the brain stem and cerebellum are unremarkable. The dura is stripped from the basilar skull, and no fractures are found. The atlanto-occipital joint is stable. The brain weighs 1400 grams. (see "Neuropathology Report").

NECK:

The neck has the previously described hemorrhage of the right sternocleidomastoid muscle. Examination of the other soft tissues of the neck, including strap muscles, thyroid gland and large vessels, reveals no abnormalities. All other anterior strap muscles of the neck are homogeneous and red-brown, without hemorrhage. The thyroid cartilage and hyoid bone are intact. The larynx is lined by intact white mucosa and is unobstructed. The thyroid gland is symmetric and red-brown, without cystic or nodular change. There is no evidence of infection or tumor, and the airway is patent. Incision and dissection of the posterior neck

demonstrates no deep paracervical muscular injury, hemorrhage, or fractures of the dorsal spinous processes.

CARDIOVASCULAR SYSTEM:

The pericardial surfaces are smooth, glistening and unremarkable; the pericardial sac is free of significant fluid and adhesions. A moderate amount of epicardial fat is present. The coronary arteries arise normally, follow a right dominant distribution and are widely patent, without evidence of significant atherosclerosis or thrombosis. The chambers and valves exhibit the usual size-position relationship and are unremarkable. The myocardium is dark red-brown, firm and unremarkable; the atrial and ventricular septa are intact. The left ventricle is 1.5 cm in thickness and the right ventricle is 0.4 cm in thickness. The aorta and its major branches arise normally, follow the usual course and are widely patent, free of significant atherosclerosis and other abnormality. The venae cavae and their major tributaries return to the heart in the usual distribution and are free of thrombi. The heart weighs 375 grams.

RESPIRATORY SYSTEM:

The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth, yellow-tan and unremarkable. The pleural surfaces are smooth, glistening and unremarkable bilaterally. The pulmonary parenchyma is red-purple, exuding a moderate amount of bloody fluid; no focal lesions are noted. The pulmonary arteries are normally developed, patent and without thrombus or embolus. The right lung weighs 650 grams; the left 600 grams.

LIVER & BILIARY SYSTEM:

The hepatic capsule is smooth, glistening and intact, covering dark red-brown, moderately congested parenchyma with no focal lesions noted. The gallbladder contains 10 ml of green-brown, mucoid bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi. The liver weighs 2,000 grams.

ALIMENTARY TRACT:

The tongue is free of bite marks, hemorrhage, or other injuries. The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds, and the lumen contains approximately 20 ml of dark fluid. The small and large bowel are unremarkable. The pancreas has a normal pink-tan lobulated appearance and the ducts are clear. The appendix is present and is unremarkable.

GENITOURINARY SYSTEM:

The renal capsules are smooth and thin, semi-transparent and strip with ease from the underlying smooth, red-brown cortical surfaces. The cortices are sharply delineated from the medullary pyramids, which are red-purple to tan and unremarkable. The calyces, pelves and ureters are unremarkable. White bladder mucosa overlies an intact bladder wall. The urinary bladder contains 50 ml. of dark yellow urine. The prostate gland 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. The right and left kidneys each weigh 175 grams.

RETICULOENDOTHELIAL SYSTEM:

The spleen has a smooth, intact capsule covering red-purple, moderately firm parenchyma; the lymphoid follicles are unremarkable. The regional lymph nodes appear normal. The spleen weighs 300 grams.

ENDOCRINE SYSTEM:

The pituitary, thyroid and adrenal glands are unremarkable.

MUSCULOSKELETAL SYSTEM:

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

MICROSCOPIC EXAMINATION

BRAIN: See "Neuropathology Report" below.

HEART: Sections of the myocardium reveal intact striated muscle fibers. There is no evidence of atrophy, hypertrophy, or recent or old myocardial infarction.

LUNGS: The alveolar spaces and small air passages are expanded and contain no significant inflammatory component or edema fluid. The alveolar walls are thin and not congested. The arterial and venous vascular systems are normal. The peribronchial lymphatics are unremarkable.

LIVER: The hepatic architecture is intact. The portal areas show no increased inflammatory component or fibrous tissue. The hepatic parenchymal cells are well-preserved with mild microvesicular and macrovesicular steatosis and focal cholestasis. There is focal benign nodule formation, and there are no sinusoidal abnormalities.

SPLEEN: The capsule and white pulp are unremarkable. There is minimal congestion of the red pulp.

KIDNEYS: The subcapsular zones are unremarkable. The glomeruli are mildly congested without cellular proliferation, mesangial prominence, or sclerosis. The tubules are well preserved. There is no interstitial fibrosis or significant inflammation. There is no thickening of the walls of the arterioles or small arterial channels. The transitional epithelium of the collecting system is normal.

Neuropathology Report (AFIP, Department of Neuropathology, Washington, D.C.)

"The principle neuropathologic findings are subarachnoid, subdural, and intracortical hemorrhage. The hemorrhages consist of fresh erythrocytes, fibrin, and polymorphonuclear leukocytes. We do not identify fibroblasts, macrophages, capillary proliferation, or hemosiderin on H&E. An iron stain is also negative for hemosiderin.

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The histologic features in this case indicate a hemorrhage of less than 48 hours duration. It is not possible histologically to be more specific.

The gross description of a left frontal skull lesion combined with a right occipital cortical lesion is consistent with a contrecoup contusion; the intracortical hemorrhages are also indicative of a contusion. We identify no other significant neuropathological changes.”

ADDITIONAL PROCEDURES

- Documentary photographs are taken by OAFME photographers
- Specimens retained for toxicologic testing and/or DNA identification are: vitreous fluid, heart blood, urine, bile, and psoas muscle
- The dissected organs are forwarded with the body

OPINION

This approximately 45 year-old male civilian Iraqi detainee died of a closed head injury with a cortical brain contusion and a subdural hemotoma while in U.S. custody. These injuries reportedly occurred when he hit his forehead while being subdued following an escape attempt, and the right occipital cortical brain hemorrhage is consistent with a recent contrecoup contusion.

The manner of death is homicide.

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LTC, USAF, MC, FS

First Chief Deputy Medical Examiner