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BROWN, MICHAEL

**2014-5143
Exam Case**

Post-Mortem Examination

Name of Deceased: BROWN, MICHAEL

Date/Time of Medical Examiner Notification: 8/9/2014 1:30:00 PM

Date/Time of Pathologist's Examination: 8/10/2014 8:00 AM

Date/Time of Pronounced Death: 8/9/2014 12:15:00 PM

Race: Black

Sex: Male

Age: 18 years

Date of Birth:

Investigator:

Pathologist:

Depth of Investigation (Investigator): Scene

Depth of Investigation (Pathologist): Complete Autopsy

Police Agency: St. Louis County Police Department (Complaint No.: 2014-43984)

External Examination: The body is clothed in a pair of yellow socks with black leafs, brown shorts with pockets, blue underwear, a gray short sleeved t-shirt (with defects), and a black cloth belt. The appearance of age is approximately as stated. The body weight is 289 pounds and the body length is 77 inches. The state of preservation is good in this unembalmed body. Rigor mortis is well developed. The body is heavier than ideal weight base upon height (BMI 34.2 kg/m²). Lividity is difficult to access due to natural skin pigmentation. There is no peripheral edema present. Personal hygiene is good. No unusual odor is detected as the body is examined. There is no abnormal skin pigmentation present. There is no external lymphadenopathy present. The hair is black. This represents the apparent natural color. The hair is worn short to medium length. There is a goatee present on the face. The body hair is of normal male distribution. The pupil of the left eye is round, regular, equal and dilated. The scleral and conjunctival surfaces of the left eye are unremarkable. The right eye cannot be accessed due to an acute traumatic injury (gunshot wound). The iris of the left eye is brown. The teeth are in a fair state of repair. The gums are normal in appearance. The oral cavity is normal in appearance. There are no injuries of the tongue. The nose is symmetrical and bloody fluid is present within the air passages. The external ears are normal in appearance and without injury. The neck is symmetrical and without masses or unusual mobility. The male breasts are normal in appearance. The abdomen is slightly protuberant with the presence of stretch marks. Prior to the acute injury of the chest, the chest and back were symmetrical with normal conformation. Prior to the acute injuries of the right arm, the upper and lower extremities were symmetrical throughout. The hands are covered with brown paper bags. There is a scar present near the left chest that measures 0.2 cm in greatest dimension. There is a scar present near the right upper abdomen that measures 0.5 cm in greatest dimension. There is a scar present near the

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elbow joint of the right arm that measures 1.0 cm in greatest dimension. There is a scar present near the right thigh that measures 0.3 cm in greatest dimension. There is a scar present near the right knee that measures 1.0 cm in greatest dimension. There are scattered scars present near the left knee that range in size from 0.5- 1.0 cm in greatest dimension. There are two scars present near the lower left leg that range in size from 0.2- 4.0 cm in greatest dimension. There are tattoos present on the body: right shoulder (“Kelle”) right forearm (“Big Mike”) and left forearm (“Dre”). The acute gunshot injuries of the right arm, chest and head are described below. The injuries of the external body surfaces are described below.

Injuries: There is a gunshot entrance wound of the vertex of the scalp. There is a gunshot entrance wound of the central forehead. There is a gunshot exit wound of the right jaw. There is a gunshot entrance wound of the upper right chest. There is a gunshot entrance wound of the lateral right chest. There is a gunshot entrance wound of the upper ventral right arm. There is a gunshot exit wound of the upper dorsal right arm. There is a gunshot entrance wound of the dorsal right forearm. There is a gunshot exit wound of the medial ventral right forearm. There is a tangential (graze) gunshot wound of the right bicep. There is a tangential (graze) gunshot wound near the ventral surface of the right thumb. There is a gunshot related defect present near the right eyebrow that measures 4.0 x 2.0 cm. There is a gunshot related defect present near the right eyelid that measures 3.0 x 1.0 cm. There is an abrasion present near the right forehead that measures 7.0 cm in greatest dimension. There is a dried abrasion present near the lateral right face that measures 3.5 cm in greatest dimension. There is an abrasion present near the upper right cheek that measures 3.0 cm in greatest dimension. There are scattered abrasions present near the lateral right surface of the lower lip that range in size from 0.1-0.2 cm in greatest dimension. There is an abrasion present near the upper right chest that measures 2.5 cm in greatest dimension. There is an area of abrasions present near the right hip that measures 1.0 x 0.2 cm. There is a dried abrasion present near the left thumb that measures 0.2 cm in greatest dimension. There is an abrasion present near the dorsal surface of the left wrist that measures 2.0 x 1.5 cm. There is a focal area of discoloration present near the dorsal surface of the 5th left finger that measures 0.2 cm in greatest dimension. There is a linear abrasion present near the ventral surface of the left forearm that measures 3.5 cm in greatest dimension. There are scattered post mortem abrasions present on the hands.

Detailed Description of Specified Injuries:

1. There is a gunshot entrance wound of the vertex of the scalp. This wound is located 20.0 cm above the level of the right external auditory meatus and near midline of the vertex of the head. The hole measures 10 mm x 8 mm. It is round with level edges. The edges focally show an abrasion ring measuring up to 1 mm in greatest dimension and is most prominent near the superior edge of the wound. No powder stipple is identified. No soot is identified. The wound track shows deeper hemorrhage. A bullet, seen on x-rays, is found within the soft tissue of the right face and is recovered and submitted as evidence. There is internal beveling of the defect in the parietal bone of the skull. Evaluation of this wound indicates that it is an entrance wound. The path of this shot is downward and rightward. The track of this bullet has been traced to pass via the scalp, soft tissue, parietal bone of the skull, right parietal lobe of the brain, right temporal lobe of the brain, right temporal bone of the skull to rest within the soft tissue of the lateral right face. Passage of the bullet through the head created fractures of the calvarial and basilar bones of the skull. Pneumocephalus is present (confirmed on post-mortem x-ray examination). Subdural and subarachnoid hemorrhage is present on the convexities of the brain. There are small, punctate contusions present within the white matter of the brain near the path of the gunshot injury. The gunshot injury path, through the brain, is approximately 12 cm in length.

2. There is a gunshot entrance wound of the central forehead. This wound is located 7.0 cm above the level of the right external auditory meatus and 2.0 cm right of the anterior midline of the head. The hole measures 15 mm x 10 mm. It is oval with slightly inverted edges. The edges show an abrasion ring

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measuring up to 3 mm in greatest dimension and is most prominent near the superior edge of the wound. No powder stipple is identified. No soot is identified. The wound track shows deeper hemorrhage. X-rays show small bullet fragments associated with this wound however due to their small size they are not recovered as evidence. This wound pairs with the wound of the right jaw described immediately below which is an exit wound. The path of the shot is downward, slightly backward and rightward. The track of this bullet has been traced to pass via the skin, soft tissue, right eye, inferior right orbital bone, soft tissue of the face to exit the skin of the right jaw. Passage of the bullet through the head/face created fractures of the facial bones. There are irregular, gunshot related defects associated with the passage of the bullet through the head/face that are present near the right eyelid and right eyebrow. The dimensions of these gunshot related defects have already been described above.

3. There is a gunshot exit wound of the right jaw. This wound is located 5.5 cm below the level of the right external auditory meatus 11.0 cm right of the anterior midline of the head. The hole measures 15 mm x 9 mm. It is irregular with clean edges. Evaluation of this wound indicates that it is an exit wound. This wound pairs with the wound of the central forehead described immediately above which is an entrance wound.

4. There is a gunshot entrance wound of the upper right chest. This wound is located 16.0 cm below the level of the right external auditory meatus and 9.0 cm right of the anterior midline of the chest. The hole measures 15 mm x 10 mm. It is oval with level edges. Edges show an abrasion ring measuring up to 2 mm in greatest dimension and is most prominent near the superior/inferior borders of the wound. No powder stipple is identified. No soot is identified. The wound track shows deeper hemorrhage. A bullet, seen on x-rays, is found within the soft tissue of the right chest and is recovered and submitted as evidence. Evaluation of this wound indicates that it is an entrance wound. The path of this shot is slightly downward and backward. The track of this bullet has been traced to pass via the skin, soft tissue, right clavicle, upper lobe of the right lung, to rest near the soft tissue of the posterior 3rd right intercostal space. The passage of the bullet through the upper lobe of the right lung created a 2 cm defect.

5. There is a gunshot entrance wound of the lateral right chest. This wound is located 20.0 cm below the level of the right external auditory meatus and 22.0 cm right of the anterior midline of the chest. The hole measures 12 mm x 12 mm. It is round. The edges show an abrasion ring measuring up to 1 mm in greatest dimension and is most prominent near the lateral edges of the wound. No powder stipple is identified. No soot is identified. The wound track shows deeper hemorrhage. A bullet, seen on x-rays, is found within the soft tissue of the lateral right back and is recovered and submitted as evidence. Evaluation of this wound indicates that it is an entrance wound. The path of this shot is downward and backward. The track of this bullet has been traced to have passed via the skin, soft tissue, and 8th right rib to rest within the soft tissue of the lateral right back. The passage of the bullet near/through the 8th right rib created a fracture of the same and subsequently created a boney defect that punctured the lower lobe of the right lung. The puncture wound within the lower lobe of the right lung measures 0.5 cm in greatest dimension.

6. There is gunshot entrance wound of the upper ventral right arm. This wound is located 20.0 cm below the level of the right shoulder and 1.0 cm right of the anterior midline of the upper right arm. The hole measures 10 mm x 10 mm. It is oval. The edges do not definitively show an abrasion ring. There is a focal area of contusion found around the wound edge that measures up to 1 mm in greatest dimension. No powder stipple is identified. No soot is identified. The wound track shows deeper hemorrhage. X-rays show no lead or bullet fragments associated with this wound. This wound pairs with the wound of the upper dorsal right arm described immediately below which is an exit wound. Evaluation of this wound indicates that it is an entrance wound. The path of this shot is slightly upward, backward and leftward. The track of this bullet has been traced to pass via the skin, soft tissue to exit the skin of the upper dorsal right arm.

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7. There is gunshot exit wound of the upper dorsal right arm. This wound is located 19.0 cm below the level of the right shoulder and 7.0 cm left of the posterior midline of the right upper arm. The hole measures 18 mm x 10 mm. It is elongated with clean edges. Evaluation of this wound indicates that it is an exit wound. This wound pairs with the wound of the upper ventral right arm described immediately above which is an entrance wound.

8. There is a gunshot entrance wound of the dorsal right forearm. This wound is located 16.0 cm below the level of the right elbow and 2.0 cm right of the posterior midline of the right forearm. The hole measures 11 mm x 10 mm. It is oval with slightly inverted edges. The edges show an abrasion ring measuring up to 1 mm in greatest dimension and is most prominent near the lateral edge of the wound. No soot is identified. No powder stipple is identified. The wound track show deeper hemorrhage. X-rays show small bullet fragments associated with this wound however due to their small size they are not recovered and submitted as evidence. Evaluation of this wound indicates that it is an entrance wound. This wound pairs with the wound of the medial ventral right forearm described immediately below which is an exit wound. The path of this shot is slightly upward, forward and leftward. The track of this bullet has been traced to have passed via the skin, soft tissue, right ulna, soft tissue, to exit the ventral medial right forearm. Passage of the bullet through the right ulna created a fracture of the same.

9. There is a gunshot exit wound of the medial ventral right forearm. This wound is located 15.0 cm below the level of the right elbow and 5.0 cm to the left of the anterior midline of the right forearm. The hole measures 20 mm x 20 mm. It is irregular with clean edges. There is slight extrusion of soft tissue from the wound edge. Evaluation of this wound indicates that it is an exit wound. This wound pairs with the wound of the dorsal right forearm described immediately above which is an entrance wound.

10. There is a tangential (graze) gunshot wound of the right bicep. This wound is located 6.0 cm above the level of the right elbow and 2.0 cm left of the anterior midline of the upper right arm. The wound measures 3.0 x 1.0 cm. It is oriented, approximately, in a 9 o'clock to 3 o'clock position. It is flat/shallow in depth and elongated in shape. The edges are dried and discolored. No powder stipple is identified. The exact directional path of the gunshot wound cannot be easily determined.

11. There is a tangential (graze) gunshot wound near the ventral surface of the right thumb. This wound is located 5.0 cm below the level of the right wrist and 4.0 cm right of the ventral midline of the right hand. The wound measures 5.0 x 2.0 cm. It is oriented, approximately, in a 12 o'clock to 6 o'clock position. It is elongated with dried edges and associated with skin tags. The skin tags point towards the tip of the right thumb. The path of the track is upwards. No powder stipple is identified. There is a focal area of discoloration near the ventral surface of the base of the right thumb.

Body Cavities: The body is opened with the usual Y-shaped thoracoabdominal and bitemporal scalp incisions. The anterior thoracic musculature and subcutaneous region show hemorrhage to match the previously described gunshot wounds. The peritoneal cavity shows no abnormalities. The left pleural cavity is unremarkable. The right pleural cavity contains 400 ml of blood. The retroperitoneum is unremarkable. The pericardial cavity is not remarkable.

Neck Organs: The soft tissue of the neck is free of hemorrhage. The hyoid bone is intact and is cartilaginous. The glottis, laryngeal and tracheal airways are patent and contain patchy areas of hemorrhage. The larynx is normal and the larynx is well cartilaginous. The thyroid gland is pale in appearance. The parathyroids are not identified.

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Mediastinum: There is a residual amount of fatty thymic tissue present that is white tan and weighs 10 gm. The mediastinum is normal in appearance.

Heart: The heart weighs 400 gm. The left ventricular wall thickness measures 1.4 cm and the right ventricular wall thickness measures 0.3 cm. The surface of the heart is smooth, glistening and transparent. The wall is of normal consistency. There is a normal amount of subepicardial fat tissue present. The size and contours of the heart are normal. The endocardium, cardiac valves and chambers are not remarkable. The coronary arteries are thin-walled and of normal diameter throughout. The cut surface of the myocardium is a pale reddish brown color.

Vascular System: The aorta and arterial system are not remarkable. The systemic veins are normal in appearance.

Lungs: The acute injury of the right lung has already been described above. The lungs together weigh 600 gm. The lung surface is gray-brown and red. The lung tissue throughout is spongy and crepitant. The air passages are lined by smooth, pink mucosa and focally contain patchy areas of blood. The cut surfaces of the lungs show areas of intraparenchymal hemorrhage present near the previously described areas of gunshot injury and rib fracture. The remaining areas of pulmonary parenchyma are unremarkable. The pulmonary artery and veins are free of emboli and thrombi.

Liver: The liver weighs 1250 gm. It is pale red-brown and of normal consistency. The cut surface of the liver is normal except for the pale color of the liver parenchyma.

Biliary Tract: The gallbladder and biliary tract are normal and free of stones.

Pancreas: The pancreas is normal in consistency and in appearance.

Gastrointestinal Tract: The entire gastrointestinal tract is examined and found normal. The stomach contains scant gastric contents. There are focal areas of hyperemia present on the mucosal surface of the stomach.

Spleen: The spleen weighs 150 gm and is normal on the surface and cut section.

Lymphatic System: The lymph nodes are normal in size and appearance.

Bone Marrow: The bone marrow is normal.

Adrenals: The adrenals are well supplied with lipoid material and are free of hemorrhage, inflammation, and primary and secondary neoplasm. The medullary portions are not remarkable.

Kidneys: The kidneys appear grossly of normal configuration and together weigh 300 gm. The cortex measures 0.7 cm in thickness. The renal capsules strip with ease to reveal a normally smooth surface. The surface is a pale reddish brown color. There is a small simple cyst within the medullary region of the left kidney that measures 1.0 cm in greatest dimension. The cysts contain brownish colored fluid. The remaining areas of the kidney parenchyma show no abnormalities. The papilla and ureters are not remarkable.

Bladder: The bladder contains 40 ml of yellow urine. The wall is entirely normal.

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Male Genital System: There is foreskin present near the head of the penis. The remaining male genitalia system is unremarkable.

Cranial Cavity: The acute gunshot injuries of the head have already been described above. The reflected scalp shows hemorrhage to match the previously described gunshot wounds. The gunshot related fractures of the calvarium and bones at the base of the skull have already been described above. The dura mater is normal in appearance except for the previously described gunshot. The weight of the unfixed brain is 1350 gm. The areas of subarachnoid hemorrhage and subdural hemorrhage present within the intracranial cavity have already been described above. Cut sections reveal that prior to the acute injury there were essentially normal structures throughout. The focal, punctate contusions present within the white matter have already been described above. The cerebrovasculature is free of atherosclerosis. The pituitary gland is grossly normal. The pineal gland is not identified.

Spinal Cord: The upper spinal cord as viewed from the cranial cavity is not remarkable.

Special Studies/Specimens Obtained: Urine, vitreous humor, chest blood, liver and brain are sent for toxicology. The previously described recovered bullets, blood stain card, fingernail clippings, fingernail scrapings, fingernail clippers, swabs of the hands, clothing and leafy green substance are submitted to the St. Louis County Police Department as evidence.

Comment: The histology examination will be issued as a supplemental report.

Tissue fragment: Sections of the tissue fragment from the exterior surface of the police officer's motor vehicle are consistent with a fragment of skin overlying soft (connective) tissue. There are features of desiccation/drying artifact present within the soft tissue. There is a granular present. Focally lightly pigmented keratinocytes are present within the basal layer of the stratified squamous epithelium.

M.D.

Assistant Medical Examiner