

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 1

PATHOLOGICAL DIAGNOSES

1. Perforating contact gunshot wound to the head with:
 - a. Entrance, right temporal scalp
 - b. Exit, left temporo occipital scalp
 - c. Extensive associated fractures of the calvarium and basilar skull
 - d. Extensive associated lacerations of the brain including hemorrhage

2. Penetrating contact gunshot wound to the head with:
 - a. Entrance, right temporal occipital scalp (area of right ear)
 - b. Recovery of bullet, left parietal calvarium
 - c. Extensive associated fractures of the calvarium and basilar skull
 - d. Extensive associated lacerations of the brain including hemorrhage

3. Perforating gunshot wounds (2 in number) to the right shoulder with:
 - a. Entrances, top of right shoulder
 - b. Common exit wound, posterior right shoulder
 - c. Fracture of the right clavicle
 - d. Lacerated right subclavian artery and vein as well as extensive soft tissue injury and hemorrhage

4. Superficial gunshot associated injury to the right hand.


5. Arteriosclerotic cardiovascular disease with:
 - a. Mild coronary artery atherosclerosis
 - b. Mild atherosclerosis of the aorta

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 2

OPINION

This 53 year old man apparently sustained a self-inflicted gunshot wound prior to sustaining several other gunshot wounds at the end of a hostage situation at a high school. He was pronounced dead at the scene. His death is attributed to severe craniocerebral trauma due to gunshot wounds (2 in number) to the head. Two other gunshot wounds to the right shoulder were seen at autopsy along with a gunshot associated injury to the left hand. Toxicological analyses of body fluids obtained at the time of autopsy were remarkable for a trace amount of opiates on a urine drug screen. A blood drug screen was negative.



Michael J. Dobersen, MD., Ph.D.
Forensic Pathologist
Coroner/Medical Examiner
Arapahoe County Coroner's Office

10/15/06

Date Signed
MJD:dtd

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 3

DATE AND TIME OF EXAMINATION:
28 September 2006 at 1215 hours.

EXTERNAL EXAMINATION

IDENTIFICATION:

The body is identified by a blue plastic morgue identification bracelet bearing the decedent's name which was removed from the zipper sealing the black plastic body bag in which the body is received. The body is also received in a white plastic body bag. Photographs are taken under my direction for identification purposes.

WITNESSES:

The autopsy is carried out at the Jefferson County Coroner's Office with Ms. Elizabeth Ortiz assisting. Witnessing the autopsy from the Park County Sheriff's Office and District Attorney's Office Investigator Betty Royse, Detective Gregg Slater Lakewood Police Department/Critical Incident Team, Ms. Sharon Morris Park County Coroner, Mr. Joe Clayton of the Colorado Bureau of Investigation, and Agent Collin Reese of the Colorado Bureau of Investigation. Photographs are obtained by Mr. Clayton and Ms. Ortiz.

CLOTHING:

The following articles of clothing are on the body appropriately placed:

1. A grey long sleeved sweatshirt with a commercially embroidered elk logo over the left upper chest. The garment is extensively blood stained particularly over the left side. A 1/8 th inch in diameter frayed hole is present over the right shoulder and has an eccentric area of grey residue surrounding it. Loosely attached over the right shoulder is a brown evidence bag. A 1/4 inch in greatest dimension is present over the right upper back panel.
2. A blue T-shirt with a commercially stenciled Harley Davidson logo over the front. The garment is also extensively blood stained and has a similar hole in a similar position in the right shoulder without the associated residue. Several frayed holes are also present over the right upper back

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 4

- panel. There are 2 frayed holes over the right upper back panel.
3. A white sleeveless T-shirt which is also blood stained. A Harley Davidson logo is over the left chest. Also over the right shoulder strap is a frayed 1/8 th inch in diameter hole which is surrounded by a small amount of black residue. A large frayed defect is also present over the right upper back panel.
 4. A pair of blue jeans without belt which are appropriately fastened and zipped. There is a moderate amount of semi-dried blood over the front of the garment. In the left front pocket is a container of "Carmex" and a white metal key ring which has three keys and a socket-type fitting. In the right front pocket is a white metal ring to which is attached two handcuff keys. A third handcuff key is separate. In the right watch pocket are 2 blue pills.
 5. A pair of grey underwear.
 6. On both feet are brown orange and black hiking shoes and black socks.

Personal affects on the body include a white metal chain which is present about the neck to which is attached a brown wooden pendant spelling out the name "Paula". Also present in the left ear lobe is a white metal stud-type ear ring which contains a single red stone.

GENERAL DESCRIPTION:

The body is that of an unembalmed, well-developed, well-nourished Caucasian male appearing to be approximately his recorded age of 53 years. Length is 6 feet 1 inch and weight is 191 lbs. Rigor mortis is well-developed in the jaw and extremities and livor mortis is present in a somewhat ventral distribution with areas of blanching consistent with the position in which the body was found and transported. The body is cool to the touch having been refrigerated.

The head is normocephalic and the scalp is covered with slightly greying brown hair in a pattern of early bifrontal and occipital

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 5

recession which measures approximately $\frac{1}{2}$ inch in length in the frontal area. The eyebrows and eyelashes are full and approximately the same color as the scalp hair. The facial hair is closely shaved except for a goatee-like greying brown beard which measures approximately $\frac{1}{8}$ th inch in length. The rest of the body hair is in a normal male distribution. Evidence of recent cutaneous injury to the head will be described below. The irides are blue grey and the sclerae and conjunctivae show no petechiae. The nose and ears are normally formed. The lips are dried and there are no petechiae on the oral mucosa. The natural teeth are in good repair. The neck is free of recent cutaneous injury.

The right and left chest are of equal size and shape and the abdomen is soft and flat. Evidence of recent cutaneous injury to the trunk will be described below. The hands are bagged with brown paper bags which are secured about the wrist by strips of red evidence tape. The upper extremities are normally formed and symmetrical and are remarkable for the evidence of recent cutaneous injury to be described below. GSR testing has been previously carried out at the scene. The finger nails extend approximately to the finger tips and only a small amount of foreign material is present underneath them. The lower extremities are normally formed and symmetrical and are free of recent cutaneous injury. The toe nails extend approximately to the tips of the toes. The external genitalia are those of a mature circumcised male and both testicles are palpable within the scrotum. The anus is free of trauma and recent cutaneous injury to the back will be described below.

DISTINGUISHING MARKS:

There is cosmetic ear piercing in the left ear lobes; over the ventral aspect of the left forearm is a 6 inch in vertical dimension dark green to black tattoo depicting a snake coiled around a sword. There are no obvious needle tracks or needle punctures and no medications accompany the body. The condition of the body is roughly consistent with the date and time of death as estimated in the investigator's report.

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 6

EXTERNAL EVIDENCE OF INJURY

1. Over the left upper forehead is an area of superficial abrasion consisting of 2 parallel linear abrasions which lie over an area measuring 1 inch in greatest dimension.
2. There is a superficial gunshot associated wound of the left upper extremity.

Over the dorsal aspect of the left second finger is a diagonally oriented furrow-like wound which measures $\frac{1}{2}$ inch in length and $\frac{3}{16}$ th inch in width. The margins are abraded and definite skin tags are not discernible. There is only extension into the superficial subcutaneous tissue. Over the dorsal aspect of the left thumb near the first joint is an irregular probable associated wound which measures $\frac{3}{4}$ inch in greatest dimension. Once again, the wound is relatively superficial and extends to the superficial subcutaneous tissues. Definite skin tags cannot be discerned.

3. There is a perforating gunshot wound to the trunk.

Entrance Wound: Over the top of the right shoulder centered at a point approximately 1 inch below the top of the shoulder and 6 inches to the right of the midline is a $\frac{1}{8}$ th inch in diameter wound of entrance which is surrounded by a uniform $\frac{1}{16}$ th inch wide abrasion collar which extends up to $\frac{1}{4}$ inch in the 6 o'clock position. There is no soot or stippling associated with the wound.

Exit Wound: Over the posterior right shoulder centered at a point approximately $\frac{1}{2}$ inch below the top of the shoulder and 7 inches to the right of midline is a $1 \frac{1}{2}$ inch in greatest dimension lacerated wound of exit.

Path of the Bullet: After entering the skin and subcutaneous tissue underlying the above described entrance wound, the bullet path extends through a fracture of the right clavicle laterally. The clavicle is entirely transected. The bullet path then extends through lacerations of the right subclavian artery and vein and through the soft tissues of the upper shoulder. The bullet path then extends to a point where the exit wound is described above.

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 7

Direction of Fire: With the body in the anatomical position, the direction of fire is from front to back with slight downward and left to right trajectory.

4. There is an additional perforating gunshot wound to the trunk.

Entrance Wound: Over the top of the right shoulder centered at the top of the shoulder and approximately 8 inches to the right of the midline is a 3/16 th inch in diameter wound of entrance which is surrounded by a 1/16 th inch wide abrasion collar. There is no soot or stippling associated with the wound.

Exit Wound: It is most likely that the exit wound is represented by the previously described wound to the right shoulder.

Path of the Bullet: The bullet path extends somewhat rostral to the above described bullet path and transects it.

Direction of Fire: With the body in the anatomical position, the direction of fire is from front to back with slight downward and minimal lateral deviation.

Radiograph: An anteroposterior radiograph of the right shoulder reveals a "lead snowstorm" appearance with only minute bullet fragments demonstrable.

5. There is a penetrating contact gunshot wound to the head.

Entrance Wound: Over the right upper neck and occipital scalp immediately below the right ear is a ½ inch in diameter somewhat lacerated wound of entrance which is surrounded by a uniform 1/8 th inch wide abrasion collar. Soot is deposited at the wound margin and within the depths of the wound. Irregular areas of marginal abrasion are present about the wound consistent with muzzle type abrasion. The entrance wound continues through the right external ear and enters the external auditory meatus through a 1 ½ inch in greatest dimension lacerated wound. Radiating lacerations extend up to 1 inch onto the right temple and

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 8

cheek. There is a large amount of soft tissue and cartilaginous injury of the right external ear. The wound itself is centered at a point 5 ½ inches below the top of the head and 7 inches to the right of midline. An associated injury is characterized by a large 2 inch in greatest dimension laceration over the right temporo-occipital scalp immediately behind the entrance wound. This wound is likely the result of laceration due to a fractured portion of the calvarium. There are bilateral periorbital ecchymoses.

Recovery of Bullet: A markedly deformed grey metal copper jacketed (including the base) bullet fragment is seen within a fracture of the left parietal calvarium. The bullet is retained as evidence. On the scalp immediately overlying the point of recovery of the bullet is a 1 ¾ inch in greatest dimension laceration which is likely due to a laceration of the scalp by the fractured calvarium. Also in the same area are recovered several smaller grey metal bullet fragments which are also retained.

Path of the Bullet: After entering the skin and subcutaneous tissue underlying the above described entrance wound, the bullet path extends through an inwardly beveled defect over the right occipital and temporal calvarium. The bullet path then extends through fractures of the right temporal calvarium and basilar skull including the middle and anterior fossae. The bullet path then perforates cerebral hemisphere and extends to a point where the bullet is recovered as described above. The bullet is found within a fractured area of the left parietal calvarium.

Direction of Fire: With the body in the anatomical position, the direction of fire is upward with right to left and front to back trajectory.

6. There is a perforating contact gunshot wound to the head.

Entrance Wound: Over the right temporal scalp centered at a point 2 ½ inches below the top of the head and 6 inches to the right of the midline is a lacerated wound of entrance which is surrounded by an abrasion collar measuring 1/8 th inch in width. Focal areas of wider marginal abrasion suggest a muzzle type abrasion. There is a moderate amount of soot within the depths of the wound and at the periphery.

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 9

An inwardly beveled defect is palpable. There is no associated stippling.

Exit Wound: Over the left occipital scalp centered at a point 5 inches below the top of the head and 8 ½ inches to the left of midline is a lacerated 1 inch in greatest dimension wound of exit.

Path of the Bullet: After extending into the skin and subcutaneous tissue underlying the above described entrance wound, the bullet path extends through an inwardly beveled jagged partially circular defect over the right temporal calvarium. The bullet path then extends to a perforating laceration of the brain and extends to a point over the left occipital scalp where an exit wound is described. The underlying calvarium shows extensive external beveling.

Direction of Fire: With the body in the anatomical position, the direction of fire is from right to left with downward and front to back trajectory.

Radiograph: An anteroposterior radiograph of the head reveals extensive fractures of the calvarium and basilar skull as well as the presence of a large radiodense bullet fragment and many smaller radiodense bullet fragments.

Note: An attempt was made to determine a temporal sequence of the two wounds to the head (i.e. a fracture line caused by a subsequent gunshot wound would not cross a fracture line caused by the prior wound). Unfortunately, this was not possible due to the extensive fragmentation of the skull caused by both wounds.

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 10

INTERNAL EXAMINATION

HEAD:

Except for the above described injuries, reflection of the SCALP shows the usual scattered reflection petechiae. Removal of the calvarium in the usual fashion shows the epidural space to be normal. There is minimal subdural blood present. The BRAIN is removed in the usual manner and weighs 1260 grams. Except for the above described injuries, the leptomeninges are smooth and glistening and the gyri demonstrate their usual orientation and configuration. The vessels at the base of the brain are normally disposed and no anomalies are identified. Except for the above described injuries, serial sections of the brain show the cerebral cortical ribbon to be intact. The usual anatomical landmarks of the cerebrum, midbrain, cerebellum, pons and medulla demonstrate no abnormalities. Removal of the DURA from the base of the SKULL is remarkable for the above described fractures. The pituitary fossa is unremarkable. The foramen magnum demonstrates the normal orientation and the first portion of the SPINAL CORD at the level of the transection viewed through the foramen magnum is unremarkable.

NECK:

Laminar dissection and examination of the SOFT TISSUES, MUSCULAR and BONY structures of the NECK demonstrates no abnormalities with the usual anatomical relationships preserved. There are no fractures of the hyoid bone or laryngeal cartilages and there are no soft tissue hemorrhages. The anterior cervical spine is intact to palpation and free of injury. The tongue is unremarkable externally and on section. There is minimal foreign material found within the upper airway.

BODY CAVITIES:

The body cavities are opened in the usual manner. The PLEURAL and PERITONEAL SURFACES are smooth and glistening. The PERICARDIUM is unremarkable. The MEDIASTINUM and RETROPERITONEUM show the usual anatomical features. The leaves of the DIAPHRAGM are intact and the organs are anatomically disposed.

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 11

ORGAN SYSTEMS

CARDIOVASCULAR SYSTEM:

The HEART weighs 440 grams. Examination of the epicardium shows it to be intact. The chambers demonstrate their usual shape and configuration with no gross hypertrophy. The CORONARY ARTERIES are normally disposed in a right dominant distribution and there are only scattered atherosclerosis with maximum focal stenosis estimated at approximately 10%. Cut surfaces of the MYOCARDIUM show a normal color and no thickening of the ventricular walls is identified. The VALVES are intact with the usual anatomical relationships and the ATRIA are unremarkable. The AORTA follows its usual course and the origins of the MAJOR VESSELS are normally disposed and unremarkable. The GREAT VESSELS of the venous return are in their usual positions and unremarkable.

RESPIRATORY SYSTEM:

The LARYNX and TRACHEA show no abnormalities and are continuous in the usual manner with the primary BRONCHI. The secondary and tertiary BRONCHI likewise are unremarkable. There is minimal foreign material found within the lower airways. The RIGHT LUNG weighs 390 grams and the LEFT LUNG weighs 320 grams. The PLEURAL SURFACES are smooth and glistening. Cut surfaces show the usual crepitant, deep red to pink parenchyma with no evidence of natural disease or injury. There is no consolidation or enlargement of the air spaces. The PULMONARY VESSELS are normally disposed and unremarkable. There are no pulmonary thromboemboli.

HEPATO-BILIARY SYSTEM:

The LIVER weighs 1410 grams with a smooth, glistening surface. Cut surfaces show the usual anatomical landmarks with a deep red cut surface. The GALLBLADDER contains approximately 20 ccs of bile and no abnormalities are demonstrated in the BILIARY TREE.

LYMPHO-RETICULAR SYSTEM:

The SPLEEN weighs 210 grams with a smooth, glistening capsule and an unremarkable parenchyma with the usual anatomical features. The THYMUS is involuted and replaced by fat. The LYMPH NODES where noted show no pathological change.

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 12

URINARY SYSTEM:

The RIGHT KIDNEY weighs 170 grams and the LEFT KIDNEY weighs 180 grams. The cortical surfaces are smooth and glistening with good preservation of the cortex and good cortico-medullary differentiation. The Pelves show the usual anatomical relationships and are continuous into normal appearing URETERS which insert into an unremarkable BLADDER containing approximately 520 ccs of straw colored urine.

INTERNAL GENITALIA:

The PROSTATE, SEMINAL VESICLES, and TESTES are unremarkable.

GASTRO-INTESTINAL SYSTEM:

The PHARYNX and ESOPHAGUS are unremarkable and the STOMACH contains approximately 200 ccs of partially digested food material including portions recognizable as home fries. The mucosal lining of the stomach is intact and is continuous into a normal duodenum and small bowel. The SMALL and LARGE INTESTINE are unremarkable and the APPENDIX is present.

ENDOCRINE SYSTEM:

The PITUITARY, THYROID, ADRENALS, and PANCREAS are unremarkable.

MUSCULO-SKELETAL SYSTEM:

Except for the above described injuries, the musculature is normally developed and the bony structures demonstrate their usual relationships. No other abnormalities are noted.

PARK COUNTY CORONER'S OFFICE
AUTOPSY REPORT

Duane Morrison
06A-MD25
Page 13

MICROSCOPIC:

Lungs: Focal atelectasis
Heart: Myocardium without diagnostic abnormality.
Coronary arteries with mild atherosclerosis.
Pancreas: Marked autolysis
Thyroid, Kidney and Liver: Without diagnostic abnormality.
Brain: Focal acute hemorrhage.
Skin, right periauricular region (entrance wound): Focal acute
hemorrhage and deposits of black granular material
(Block C).
Skin, right temporal scalp (entrance wound): Focal acute
hemorrhage and deposits of black granular material
(Block D).



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Boulder, Colorado 80301
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October 5, 2006

Sharon Morris
Park County Coroner
P.O. Box 242
Fairplay, CO 80440

Duane Morrison
ChemaTox 156745
Analyzed 10/02/06

Blood Alcohol - 0.003g/100ml

By Headspace Gas Chromatography

Urine Drug Screen -

Amphetamines	Negative
Benzodiazepines	Negative
Cannabinoids	Negative
Cocaine	Negative
Methadone	Negative
Opiates	Positive
Tricyclic Antidepressants	Negative

Blood Drug Screen -

Opiates Negative

By Fluorescence Polarization Immunoassay

Blood Drug Confirmation -

Basic Extraction - No Drugs Detected

Acid/Neutral Extraction - No Drugs Detected

By Gas Chromatography/Mass Spectroscopy

Respectfully submitted,

D. Woodruff
Daniel T. Woodruff

Sarah S. Urfer M.S.
Sarah S. Urfer, M.S.

DTW/SSU:rdj



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Park County
Coroner's Office

Preliminary Anatomic Diagnosis

Autopsy No. 06AMP25 Pathologist MAP DOD 9/27/06

Name Morrison, Duane Date of Autopsy 9/28/06

Disease or condition directly leading to death

A) Contact GSWs (1 perforating, 1 penetrating) GSWs to the head resulting in severe craniocerebral trauma

Due to

B) _____

Due to

C) _____

Other significant conditions

(2 in H) Perforating GSW to the trunk with entrances on (R) shoulder and exits (R) posterior shoulder
Superficial gunshot associated injuries, (L) hand

Other findings at autopsy

MAP
Doctor

OCT-5-2006 15:59 FROM: CHEMATOX LAB

3034400668

TO: 3032716488

P.2

Mike

ChemaTox
LABORATORY, Inc.

1401 Western Ave.
Boulder, Colorado 80301
(303) 440-4500
(800) 334-1685

October 5, 2006

Sharon Morris
Park County Coroner
P.O. Box 242
Fairplay, CO 80440

Duane Morrison
ChemaTox 156745
Analyzed 10/02/06

Blood Alcohol - 0.003g/100ml
By Headspace Gas Chromatography

Urine Drug Screen -	Amphetamines	Negative
	Benzodiazepines	Negative
	Cannabinoids	Negative
	Cocaine	Negative
	Methadone	Negative
	Opiates	Positive
	Tricyclic Antidepressants	Negative

Blood Drug Screen -	Opiates	Negative
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By Fluorescence Polarization Immunoassay

Blood Drug Confirmation -

Basic Extraction -	No Drugs Detected
Acid/Neutral Extraction -	No Drugs Detected

By Gas Chromatography/Mass Spectroscopy

Respectfully submitted,

D. Woodruff
Daniel T. Woodruff

Sarah S. Urfer M.S.
Sarah S. Urfer, M.S.

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