

Waters reaction, E. Dr. Applied
Blood & air up ^{11/25/63}
upper mediastinum

Only a few seen in
size 3-5 mm.

Important. Cat.
wall of the trachea -
no mucus in the wound.

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Home

Off in Med. School

Gen. Dept. of Surgery

Dr. Shiers

Dr. Malcom Perry at Home

Ab3.272

Kennedy, John F.

Date of birth — — 1917

Date of death 11/22/63

Place of death 1⁰⁰_{PM} EST Dallas, Tex.

Place of autopsy 8⁰⁰_{PM} EST Bethesda, Md.

Clinical Summary

According to available information the deceased, President John F. Kennedy, was riding in an open car in a motorcade during an official visit to Dallas, Texas on 22 Nov. 1963. The president was sitting in the right rear seat with Mrs. Kennedy seated on the same seat to his left. Sitting directly in front of the president was Gov. John B. Connally of Texas and directly in front of Mrs. Kennedy sat Mrs. Connally. The vehicle was moving at a slow rate of ~~approximately 10-15 mph~~ ~~at approximately 10-15 mph~~ down an incline into an underpass that leads to a freeway route to the Dallas Trade Mart when the president was to ^{deliver} give an address. Three shots were heard and the president fell ^{backward} ~~forward~~ ~~to the floor of the vehicle~~.

bleeding from the head. (Governor Connally was seriously wounded by the same gunfire). According to newspaper reports (Washington Post Nov. 23, 1963) Bob Jackson, a Dallas Times Herald photographer, said he looked around as he heard the shots and saw a rifle barrel disappearing into a window on an upper floor of the nearby Texas School Book Depository building.

Shortly following the wounding of the two men the car was driven to Parkland Hospital. In the emergency room of that hospital the president was attended by Dr. Malcolm Perry. Telephone communication with Dr. Perry on Nov. 23, 1963 develops the following information relative to the observations made by Dr. Perry and procedures performed there prior to death.

Dr. Perry noted the massive wound of the head and a second, puncture wound, of the low anterior neck in approximately the midline. A tracheostomy was performed by extending the latter

(3)

wound. At this point bloody air was noted bubbling from the wound and an injury to the left lateral wall of the trachea was observed. Incisions were made in the upper anterior chest wall bilaterally to combat possible sub-cutaneous emphysema. Intravenous infusions of blood and saline were begun and oxygen was administered. Despite these measures cardiac arrest occurred and closed chest cardiac massage failed to re-establish cardiac action. The president was pronounced dead approximately thirty to forty minutes after receiving his wounds.

The remains were transported via the presidential plane to Washington, D.C. and subsequently to the Naval Medical School, National Naval Medical Center, Bethesda, Md. for post-mortem examination.

General Description of Body The body is that of a muscular, well-developed and well-nourished adult caucasian male measuring 73 1/2 inches and weighing approximately

170 lbs. There is beginning rigor mortis, minimal dependent livor mortis of the dorsum and early algor mortis. The hair is reddish-brown and abundant, the eyes are blue the rt. pupil measuring 8 mm. in diameter, the left 4 mm. There is edema and ecchymosis of the inner canthus ^{region} of the left eye lid measuring approximately 1.5 cm in greatest diameter. There is edema and ecchymosis diffusely over the supra-orbital ridge with abnormal mobility of the underlying bone. (The remainder of the scalp will be described with the skull.) There is dotted blood on the external ears but otherwise the ears, nose and mouth are essentially unremarkable. The teeth are in excellent repair and there is some pallor of the oral mucous membrane.

Situated on the upper rt. posterior thorax just above the upper border of the scapula there is a 7 x 4 mm oval ~~superficial~~ wound. This wound is measured

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to be 14 cm. from the tip of the st.
acromion process and 14 cm. below the
tip of the st. mastoid process.

Situated in the low anterior neck
& approximately the level of the third and
fourth tracheal rings is a 6.5 cm. long
transverse wound with widely gaping
irregular edges. (The depth and character
of these wounds will be further described
below.)

Situated on the anterior chest wall
in the nipple line are bilateral 2 cm. long
recent transverse surgical incisions into
the subcutaneous tissue. The one on the
left is situated 11 cm. cephalad to the
nipple and the one on the right 8 cm.
cephalad to the nipple. There is no
hemorrhage or ecchymosis associated
with these wounds. A similar skin
wound measuring 2 cm. in length is
situated on the antero-lateral aspect of
the ~~right~~ ^{left} mid arm. Situated on the
antero-lateral aspect of each arm is a

(6)

Recent 2 cm. transverse incision into the subcutaneous tissue.

There is an old well healed 8 cm. Mc Burney abdominal incision. Over the lumbar spine in the midline is an old, well healed 15 cm. scar. Situated on the upper antero-lateral aspect of the right thigh is an old, well healed 8 cm scar.

Missile Wounds

1. There is a large irregular defect of the scalp and skull on the right involving chiefly the parietal bone but extending somewhat into the temporal and occipital regions. In this region there is an actual absence of scalp and bone producing a defect which measures approximately 13 cm. in greatest diameter.

From the irregular margins of the above scalp defect tears extend in stellate fashion into more or less intact scalp as follows:

a) From the right inferior temporal -

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The major portion of the right cerebral hemisphere. At this point it is noted that the falx cerebri is extensively lacerated with disruption of the superior sagittal sinus.

Upon reflecting the scalp multiple complete fracture lines are seen to radiate from both the large defect at the vertex and the smaller ~~partial~~ wound at the occiput. These vary greatly in length and direction the longest measuring approximately 19 cm. These result in the production of numerous fragments which vary in size from a few millimeters to 10 cm. in greatest diameter.

The complexity of these fractures and the fragments thus produced are satisfactorily described and are better appreciated in photographs and ~~radiograms~~ roentgenograms which are prepared.

The brain is removed and preserved for further study following formalin fixation. Received as separate specimens ^{for histology} are three fragments of skull bone which in

(9)

aggregate roughly approximate the dimensions of the large sized described above. At one angle of the largest of these fragments is a portion of the perimeter of a roughly circular wound ^{principally} of ~~size~~ ^{shape} which exhibits ^{the} ~~shape~~ ^{approximate} of the outer ~~edge~~ ^{margin} and estimated to measure approximately 2.5 to 3.0 cm in diameter. Roentgenograms of this fragment reveal minute ^{fragments} of metal in the bone at this margin. Roentgenograms of the skull reveal multiple minute metallic fragments along a line corresponding with a line joining the above described ^{outer} ~~perimeter~~ ^{margin} of the wound and the st. supra-orbital ridge. From the surface of the dimpled st. orbital center two small irregularly shaped fragments of metal are recovered. These measure 7 x 2 mm + 3 x 1 mm. These are placed in the custody of agents Francis X. O'Neil Jr. and James W. Smith of the Federal Bureau of Investigation. ^{Subscribed} ~~Subscribed~~ a receipt therefor (attached) ^{principally}

1. The second wound of entry is that

(10)

described above in the upper st. posterior
thorax. Beneath the skin there is evidence
of sub-cutaneous tissue and musculature.
The muscle path through the fascia and
musculature cannot be easily probed. The
wound of ~~st~~^{presumably} was that described by Dr.
Malden Perry of Dallas in the low-anterior
cervical region. When observed by Dr.
Perry the wound measured a "few-
millimeters in diameter" however it was
extended as a tracheotomy incision and thus
its character is distorted at the time of
autopsy. However there is considerable
evidence of the strap muscles of the st
^{side of the} neck and of the fascia about the trachea
adjacent to the skin of the tracheotomy
wound. The third point of reference in
connecting these two wounds is in
the apex (supra-clavicular portion) of
the st. pleural cavity. In this region
there is contusion of the parietal pleura
and of the extreme apical portion of the
st. upper lobe of the lung. In both

measures the diameter of contusion and ecchymosis at the point of maximal involvement measures 5 cm. Both the visceral and parietal pleura situated overlying these areas of trauma.

Inspection The scalp wounds are studied in the coronal plane to examine the cranial contents and the customary "Y" shaped incision is used to examine the bony cortex.

Thoracic Cavity - The bony cage is unremarkable. The thoracic organs are in their normal positions and relationships and there is no increase in free pleural fluid. The above described area of contusion in the apical portion of the rt. pleural cavity is noted.

Lungs - The lungs are of essentially similar appearance the rt. weighing 320 gm, the left 290 gm. The lungs are well aerated with a smooth glistening pleural surfaces and grey-pink color. A 5 cm dia. area of unipolar red discoloration and increased firmness to palpation is situated in the apical

portion of the rt. upper lobe. This correspond
to the similar area described in the overlying
peritoneal pleura. ^{hemorrhage into pulmonary parenchyma.}

Heart - The ^{pericardial} cavity is smooth
walled and contains approximately 1 cc of
straw colored fluid. The heart is of
essentially rounded external contour and
weighs 35.6 gm. The pulmonary artery is
opened in situ and no abnormalities are
noted. The cardiac chambers contain
moderate amounts of post-mortem clotted
blood. There are no gross abnormalities
of the leaflets of the cardiac valves.
The following are the circumferences of the
major vessels: aortic 7.5 cm, pulmonary 7 cm,
truncus 12 cm, mitral 11 cm. The
myocardium is firm and reddish-brown.
The left ventricular myocardium averages
1.2 cm in thickness, the rt. ventricular
myocardium 0.4 cm. The coronary arteries
are dissected and of normal distribution and
smooth walled and elastic throughout.

Abdominal Cavity - The abdominal organs are in their normal positions and relationships and there is no increase in free peritoneal fluid. The vermiform appendix is surgically absent and there are a few adhesions joining the region of the caecum to the ventral abdominal wall at the above described old abdominal incision scar.

Skeletal System - Aside from the above described skull wounds there are no significant gross skeletal abnormalities.

Photography - Black and white and color photographs are prepared of significant findings, especially ^{depending} of significant findings, especially ~~findings~~ ^{findings} ~~findings~~ ^{findings}.

Roentgenograms - Roentgenograms are made of the entire body and of the separately submitted three fragments of skull bone. ~~Darkroom~~ ^{Darkroom}.

Summary Based on the above observations it is our opinion that the deceased died as a result of two ^{penetrating} gunshot wounds inflicted by high velocity projectiles fired by a person

as persons unknown. The projectile were fired from a point behind and somewhat ^{above} ~~above~~ ^{the level of the} ~~the level of the~~ ^{of the body at the moment of impact.} ~~of the body at the moment of impact.~~ The observations and available information do not permit a satisfactory estimate as to the sequence of the two wounds.

The fatal missile entered the skull above and to the right of the external occipital protuberance. A ~~small~~ portion of the projectile traversed the cranial cavity in a posterior-anterior direction (see lateral skull roentgenogram) depositing minute particles along its path. ~~The~~ ^A ~~portion~~ ^{portion} of the projectile made its exit through the parietal ^{bone} ~~bone~~ on the right. ~~The two wounds carrying with it~~ portions of cerebrum, skull and scalp. The two wounds of the skull combined with the force of the missile produced extensive fragmentation of the skull, laceration of the superior sagittal sinus and of the rt. cerebral hemisphere. The ~~second~~ ^{other} missile entered the rt. superior posterior thorax above the

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scapula ~~to the right of the neck~~ and
traversed the soft tissues of the supra-
scapular and supra-clavicular portions of
the base of the right side of the neck. The
missile produced contusions of the st. opical
parietal pleura and of the opical portion
of the st. upper lobe of the lung. The missile
contused the strap muscles of the st. side
of the neck, damaged the trachea and
made its exit through the anterior surface
of the neck. As far as can be ascertained
this missile struck no bony structures in
its path through the body.

A supplementary report will be
submitted following more detailed examination
of the brain and of microscopic sections.
However it is not anticipated that these
examinations will materially alter the
findings.

In addition I am of opinion that the
wound of the skull produced such extensive
damage to the brain as to preclude the
possibility of the deceased surviving this injury.

AUTOPSY DESCRIPTIVE

HEP PAT- (1-53)

AUTOPSY

NO. 1 1938 DATE 1-21-42 HR. STARTED HR. COMPLETED

NAME: RANK/RATE

DATE/HOUR EXPIRED: WARD DIAGNOSIS

PHYSICAL DESCRIPTION: RACE: Obtain following on babies only:

Height in. Weight lb. Hair Color Crown-top in. Crown-heel in.

Chest circumference Head in. Chest in. Abd. in.

WEIGHTS: (Grams, unless otherwise specified)

LUNG, RT. 330 KIDNEY, RT. 1375 ADRENALS, RT.

LUNG, LT. 290 KIDNEY, LT. 140 ADRENALS, LT.

BRAIN LIVER 160 PANCREAS

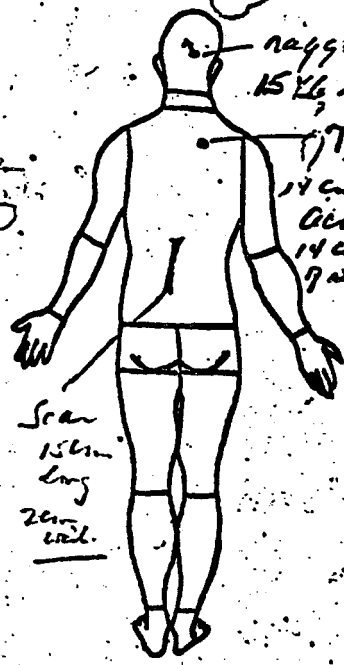
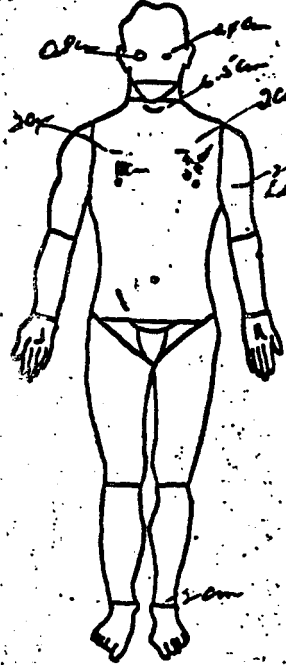
SPLEEN 90 HEART 70 THYROID

TESTES OVARY

HEP. MEASUREMENTS: A 7.5 cm. P 9 cm. R 12 cm. X 16 cm.

LW 1.5 cm. HX 4 cm.

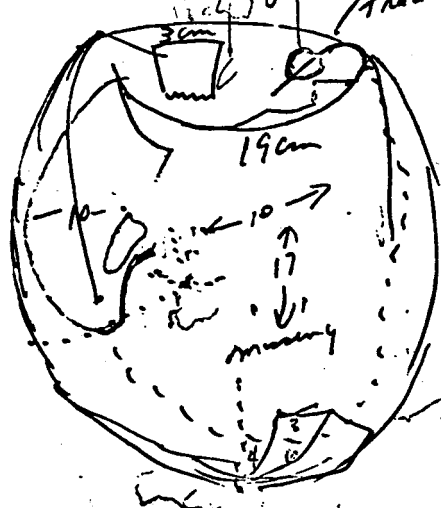
NOTES:



Pathologist

C
W

Vertical
cracked
plate at eye
Fracture roof floor



• 4th long from vertical
• 5cm from the
• Coronal Sutures back





U. S. NAVAL MEDICAL SCHOOL
NATIONAL NAVAL MEDICAL CENTER
BETHESDA, MARYLAND 20814

In reply refer to

24 November 1963

C-E-R-T-I-F-I-C-A-T-E

I, James J. Humes, certify that all working papers associated with Naval Medical School Autopsy Report A63-272 have remained in my personal custody at all times. Autopsy notes and the holograph draft of the final report were handed to Commanding Officer, U. S. Naval Medical School, at 1700, 24 November 1963. No papers relating to this case remain in my possession.

J. J. Humes
J. J. HUMES
CDR, MC, USN

Received above working papers this date.

J. H. Stover, Jr.
J. H. STOVER, JR.
CAPT, MC, USN
Commanding Officer, U.S. Naval Medical School
National Naval Medical Center



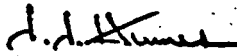
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BETHESDA, MARYLAND 20814

In Reply Refer to

24 November 1963

C-E-R-T-I-F-I-C-A-T-E

I, James J. Humes, certify that I have destroyed by burning certain preliminary draft notes relating to Naval Medical School Autopsy Report A63-272 and have officially transmitted all other papers related to this report to higher authority.


J. J. HUMES
CER, MC, USN