INTER PRESS

History of Medicine

Similarities in Fatal Woundings of John Wilkes Booth and Lee Harvey Oswald

> JOHN K. LATTIMER, M.D. New York City

Professor of Urology and Chairman, Department of Urology, College of Physicians and Surgeons of Columbia University

JUST ONE HUNDRED YEARS AGO, truculent, defiant John Wilkes Booth, restricted by his broken leg, shuffled forward, bathed in a glare of brilliant light, surrounded by his captors.

Suddenly, a single pistol shot rang out, and Booth crumpled to the floor, his face ashen and his limbs dangling limply. Within two hours he was dead, silenced, never having been brought to trial, never having provided society with a chance to provoke from this recognition-hungry showman any information as to his motivation, or words which might have implicated others, or to bring forth any data in his own defense. It was a frustrating, unlawful, bitter moment (Fig. 1).

The man who then stepped forward to confess the shooting was an unstable, fanatical exhibitionist, frequently in trouble, who later was committed to an insane asylum. His name was Boston Corbett (Fig. 2). Like Jack Ruby,¹ he admitted having been still closer to his victim,

Presented at the 160th Annual Meeting of the Medical Society of the State of New York, New York City, Session on History of Medicine, February 14, 1966.

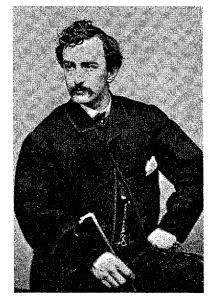


FIGURE 1. John Wilkes Booth, handsome, successful, but short (5 feet 6 inches) dramatic actor and enemy (Confederate) sympathizer who shot President Lincoln and was himself shot down by Boston Corbett twelve days later. Booth, restricted by broken leg, was shot through spinal cord, probably with Colt revolver, in glare of light from fire set by captors and died about two hours later.

but waited before he chose his moment to $shoot.^2$ Corbett had fancied himself as a lay preacher, and while working as a hat finisher in the city from which he took his first name, had an encounter with two ladies of the street, which upset him considerably.³

He then went home, according to Prichard and Herring⁴ and "to be holy," as he put it, cut off both his testicles with a pair of scissors. The records of the Massachusetts General Hospital for July 16, 1858, describe the incident as follows:

Is a Methodist, and having perused the eighteenth and nineteenth chapters of Matthew, he took a pair of scissors and made an opening one inch long in the lower part of the scrotum. He then drew down the testes and cut them off. He then went to prayer meeting, walked about some, and ate a hearty



FIGURE 2. Boston Corbett, religious fanatic, also frequently in difficulties, who had castrated himself in moment of religious fervor, deliberately shot down Booth after other opportunities had passed and against orders. Corbett later declared insane after act of armed offense.

dinner. There was not much external hemorrhage, but a clot had filled the opening so that the blood was confined in the scrotum, which was swelled enormously and was black. He called on Dr. Hodges, (R. M.), who laid it open and removed the blood; he tied the cord and sent him here.

Then followed concise progress notes indicating an uneventful course.

This previous history of instability did not prevent his getting into the Army, however, and ultimately finding his way into the 16th New York Cavalry where he fought with fanatical zeal. During his service career, he was frequently in difficulty because of his religious fanaticism, however. At the time he shot Booth, in direct disobedience to the standing order for the capture of the assassin alive, he claimed he did so on divine instruction. He was so unstable he was not permitted to march with his regiment in Lincoln's funeral procession and was still in camp when the order came for a hastily organized patrol to go out on an emergency mission.

Booth's capture

On the date with which we are concerned, April 26, 1865, he was assigned to the pickup detail of cavalrymen under Lt. Edward Doherty which was to accompany Detective (Major) Everton J. Conger, of Secretary of War Stanton's National Police Detectives, a kind of secret police, in the attempt to capture Booth, whose trail had finally been picked up twelve days after the shooting of President Lincoln. The detail galloped to Bowling Green, Kentucky, to interrogate three ex-Confederate soldiers to whom Booth had made himself known, in the mistaken belief that they would sympathize with him and help him escape. They told Major Conger and Lieutenant Doherty where they had left Booth, at the farm of a Mr. Garrett, three miles south of the ferry across the Rappahanock River, near Port Royal, Virginia. They then returned to the Garrett farm. The events which followed can best be described in the words of Sergeant Corbett and Major Conger, testifying at the trial of the conspirators. Corbett² described the scene as follows:

Lieutenant Doherty told me that Booth was in that house saying, "I want you to deploy the men right and left around the house and see that no one escapes," which was done. After making inquiry at the house it was found that Booth was in the barn. A guard was then left upon the house and the main portion of the men thrown around the barn, closely investing it, with orders to allow no one to escape. We had previously been cautioned to see that our arms were in readiness for use. After being ordered to surrender and told the barn would be fired in five minutes if he did not do so. Booth made many replies. He wanted to know who we took him for; he said that his leg was broken; and what did we want with him; and he was told that it made no difference. His name was not mentioned in the whole affair. They were told that they must surrender as prisoners. Booth wanted to know where we would take them, if they would give themselves up as prisoners. He received no satisfaction but was told that he must surrender unconditionally, or else the barn would be fired. The parley lasted much longer than the time first set; probably a full half hour, but he positively declared he would not surrender. At one time he made the remark, "Well my brave boys, you can prepare a stretcher for me," and at another time, "Well, Captain, make quick work of it; shoot me through the heart," or words to that effect; and thereby I knew that he was perfectly desperate and did not expect that he would surrender. After a while, we heard the whispering of another person-although Booth had previously declared there was no one there but himself-who proved to be the prisoner Herold. Although we could not distinguish the words. Herold seemed to be trying to persuade Booth to surrender. After

a while he sang out, "Certainly," seeming to disdain to do so himself. Said he, "Cap, there is a man in here who wants to surrender mighty bad." Then I suppose words followed inside that we could not hear. Herold perhaps thought he had better stand by him, or something to that effect. Then Booth said, "Oh, go out and save yourself, my boy, if you and then he said, "I declare before my can' Maker that this man here is innocent of any crime whatever," seeming willing to take all the blame on himself and trying to clear Herold. He was told to hand out his arms. Herold declared that he had no arms, and Booth declared that all the arms belonged to him and that the other man was unarmed. He was finally taken out without his arms.

Immediately after Herold was taken out, the detective, Mr. Conger, came around to the side of the barn where I was, and passing me, set fire to the hay through one of the cracks of the boards a little to my right. I had previously said to Mr. Conger, though, and also to my commanding officer, that the position in which I stood left me in front of a large crack—you might put your hand through it-and I knew that Booth could distinguish me and the others through these cracks in the barn, and could pick us off if he chose to do so. In fact, he made a remark to that effect at one time. Said he, "Cap, I could have picked off three or four of your men already if I wished to do so. Draw your men off fifty yards, and I will come out," or such words. He used such language many times. Then the fire was lit, which was almost immediately after Herold was taken out of the barn. As the flames rose, he was seen. We could then distinguish him about in the middle of the barn, turning toward the fire, either to put the fire out or else to shoot the one who started it: I did not know which; but he was then coming toward me, as it were, a little to my right-a full front breast view. I could have shot him then much easier than when I afterward did, but as long as he was there, making no demonstration to hurt anyone, I did not shoot him, but kept my eye on him steadily. Finding the fire gaining upon him, he turned to the other side of the barn and got toward where the door was, and as he got there I saw him make a movement toward the door. I supposed that he was going to fight his way out. One of the men who was watching him told me that he aimed the carbine at me. He was taking aim with the carbine, but at whom I could not say. My mind was upon him attentively to see that he did no harm, and when I became impressed that it was time, I shot him. I took steady aim on my arm, and shot him through a large crack in the barn. When he was brought out I found that the wound was made in the neck, a little back of the ear, and came out a little higher up on the other side of the head. He lived, I should think, until about seven o'clock that morning; perhaps two or three hours after he was shot. I did not myself

hear him speak a word after he was shot except to cry or shout as he fell. Others, who were near him and watching him constantly, said that he did utter the words which were published.

National Police Detective Everton J. Conger,⁵ who was in charge of the detail, also testifying at the trial of the conspirators, said, concerning the shooting:

I went around to the corner of the barn. pulled some hay out, twisted up a little of it, set fire to it and stuck it back through on top of the hay. It was loose, broken up hay, and blazed very rapidly-lit right up at once. I put my eye up to the crack next to the one the fire was put through and looked in, and I heard something drop to the floor which I supposed to be Booth's crutch. He turned around toward me. When I first got a glimpse of him he stood with his back partly to me, turning toward the front door. He came back within five feet of the corner of the barn. The only thing I noticed he had in his hands when he came was a carbine. He came back, and looked along the cracks, one after another, rapidly. He could not see anything. He looked at the fire, and from the expression on his face I am satisfied he looked to see if he could put it out and was satisfied he could not do it, it was burning too much. He dropped his arm, relaxed his muscles, turned around and started for the door at the front of the barn. I ran around to the other side and when about half around I heard the report of a pistol. I went right to the door, and found Lieutenant Baker looking at Booth, holding him or raising him up, I do not know which. I said to him "He shot himself." He said, "No, he did not, either." Said I, "Whereabouts is he shot—in the head or neck?" I raised him then, and looked on the right side of his neck, and saw a place where the blood was running. I said, "Yes, Sir, he shot himself." Lieutenant Baker replied very earnestly that he did not. I then said, "Let us carry him out of here; this will soon be burning." We took him up and carried him out on the grass, underneath the locust trees, a little way from the door. I went back into the barn immediately to see if the fire could be put out and tried somewhat myself to put it out, but I could not; it was burning so fast, and there was no water or nothing to help with. I then went back. Before this, I supposed him to be dead. He had all the appearance of a dead man, but when I got back to him, his eyes and mouth were moving. I called immediately for some water, and put it on his face, and he somewhat revived, and attempted to speak. I put my ear down close to his mouth, and he made several efforts to speak, and finally I under-stood him to say, "Tell mother I died for my country." I said to him, "Is that what you say?" repeating it to him. He said "Yes." They carried him from there to the porch of

Mr. Garrett's house and laid him on an old straw bed or something. By that time, he revived considerably; he could then talk in a whisper, so as to be intelligibly understood; he could not speak above a whisper. He wanted water, we gave it to him. He wanted to be turned on his face. I said to him, "You cannot lie on your face," and he wanted to be turned on his side; we turned him upon his side three times, I think, but he could not lie with any comfort, and wanted to be turned immediately back. He asked me to put my hand on his throat and press down, which I did, and he said "Harder." I pressed down as hard as I felt necessary, and he made very strong exertions to cough, but was unable to do so-no muscular exertion could he make. I supposed he thought something was in his throat, and I said to him, "Open your mouth and put out your tongue, and I will see if it bleeds," which he did. I said to him, "There is no blood in your throat; it has not gone through any part of it there." He rep two or three times. "Kill me, kill me." He repeated The reply was made to him, "We don't want to kill you; we want you to get well." I then took what things were in his pockets, and tied them up in a piece of paper. He was not then quite dead. He would-once, perhaps, in five minutes-gasp; his heart would almost die out, and then it would commence again, and by a few rapid beats would make a slight motion. I left the body and the prisoner Herold in charge of Lieutenant Baker. I told him to wait an hour if Booth were not dead; if he recovered, to wait there and send over to Belle Plain for a surgeon from one of the gunships, and, if he died in the space of an hour, to get the best conveyance he could and bring him on. I stayed there some ten minutes after that was said, when the doctor there said that he was dead.

I think we got to Garrett's barn about two o'clock in the morning, and it was about fifteen minutes past three that Booth was shot and carried out on the grass.

Subsequent to his admission of the shooting, Boston Corbett was placed under arrest because the orders of his detail had ostensibly been to capture Booth alive. He was very shortly released, however, and indeed was somewhat lionized, and was finally given some \$2,500 of the reward money which had been offered for Booth's capture, dead or alive. He was later made doorkeeper and sergeant-at-arms of the Kansas State Legislature, listening intently to the proceedings. On one fateful day, while he was listening to the page boys starting a mock session of the legislature, he heard one boy mock the chaplain's opening prayer. This heresy instantly enraged him, and he suddenly leaped to his feet, pulled out his pistol, and began to

shoot at the boys. Corbett was thereafter declared insane and committed to a mental institution. Sometime later he escaped from this institution and was never heard from again. It was presumed that he may have died while walking across the plains in an attempt to escape to Mexico, although legends arose about his being a successful patent medicine man in the South in later years.⁴

Booth's autopsy

Booth, sunburned and haggard from twelve days of hiding in the underbrush from searching cavalry patrols, had lost his handsome theatrical appearance, but was identified by several persons by a permanent scar on the back of his neck which apparently had a large cicatrix because it had been broken open by the careless Booth before it was entirely healed.⁶ This scar was the subject of an article by May,⁷ the man who had originally sutured the wound and later identified it. Identification was further confirmed by Booth's initials, which he had tattooed on his own hand in scrawling letters as a child.8 His dentist, Dr. Merrill, who had filled two teeth for Booth the week before, forced Booth's mouth open and identified his fillings.9 However, we can find no written report of the dental examination. Booth's family later accepted the body as his, with no question, even though the question was raised as to how they could be sure it was his body.

The autopsy was performed by Janvier Woodward, M.D., of the Army Institute of Pathology, the same man who had performed the autopsy on Booth's victim, President Lincoln, twelve days before, at the White House. His report¹⁰ on Booth's autopsy is as follows:

Case JWB: Was killed April 26, 1865, by a conoidal pistol ball, fired at the distance of a few yards, from a cavalry revolver. The missile perforated the base of the right lamina of the 4th lumbar vertebra, fracturing it longitudinally and separating it by a fissure from the spinous process, at the same time fracturing the 5th vertebra through its pedicle, and involving that transverse process. The projectile then traversed the spinal canal almost horizontally but with a slight inclination downward and backward, perforating the cord which was found much torn and discolored with blood (see specimen 4087 sect. I

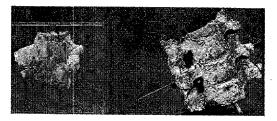


FIGURE 3. Photograph of John Wilkes Booth's third, fourth, and fifth cervical vertebrae and spinal cord, showing transverse bullet hole going from right to left through spinal canal, penetrating spinal cord at level of fourth cervical vertebra. (Photo courtesy Armed Forces Institute of Pathology, Washington, D.C.)

AMM) (Fig. 3). The ball then shattered the bases of the left 4th and 5th laminae, driving bony fragments among the muscles, and made its exit at the left side of the neck, nearly opposite the point of entrance. It avoided the large cervical vessels and the filaments of the 2nd and 3rd cervical nerves. These facts were determined at autopsy which was made on April 28. Immediately after the reception of the injury, there was very general paralysis. The phrenic nerves performed their functions, but the respiration was diaphragmatic, of course, and labored and slow. Deglutition was impracticable, and one or two attempts at articulation were unintelligible. Death, from asphyxia, took place about two hours after the reception of the injury.

J. J. WOODWARD

When it was mentioned that the photographic division of the Army Institute of Pathology had reproduced the picture of John Wilkes Booth for distribution to aid in his capture after the death of President Lincoln in April 1865, Dr. Woodward's associate, E. M. Schaeffer, M.D., was reminded of one of his first duties at the museum as a hospital steward of the Army.¹¹ This was to mount on cardboard several hundred of these copies which had been made by Edward Curtis, M.D. Not long after this, Dr. Woodward received a message from the War Department directing him to take his postmortem case and repair to the arsenal. When he returned to the museum, he said that he had made an autopsy on Booth, whom he would have recognized from the photographs, although the face was much freckled and tanned by exposure to the sun. Dr. Woodward brought with him the cervical vertebrae and spinal cord showing the track of the bullet that had killed Booth; after further examination, these

were properly prepared and placed in the museum (Fig. 3). The specimens had been wrapped in stout brown paper. At that time, there was a rage for relics and souvenirs of all kinds, and, influenced by this feeling, Dr. Schaeffer cut off and preserved, duly labeled, a portion of the bloodstained paper as a somewhat ghastly souvenir of the tragedy. He placed it in his cabinet and had forgotten it when, about fifteen years afterward, in searching for some specimens of dried human blood, to illustrate to his private class in microscopical technics, he remembered the paper; and submitting it to the proper treatment by macerating and teasing with needles, to bring out any structure that might remain, much to his pleasure and rather to his surprise, the red corpuscles were seen with a vivid distinctness, often sought in vain in more recent cases.9

On April 29, 1865, Surgeon-General Joseph K. Barnes deposited in the medical museum a portion of the spinal cord in the section of the third, fourth, and fifth cervical vertebrae which were removed at autopsy from the body of the assassin, John Wilkes Booth (Fig. 3). The spinal cord was perforated from right to left and the laminae of the fourth and fifth vertebrae were fractured by a conoidal pistol ball fired at a distance of a few yards. Booth died two hours after the injury.¹²

An additional small fragment of John Wilkes Booth's body was discovered by the author in a bottle in the Mutter Medical Museum of the College of Physicians of Philadelphia, in the care of Curator Ella N. Wade (Fig. 4). This is a fragment approximately $1^{1}/_{4}$ by $^{3}/_{4}$ inches, which resembles a fragment of rib cartilage and bears the following label: "PART OF THE THORAX (CAVITY OF THE CHEST) OF J. WILKES BOOTH, APRIL 14, 1865, THE ASSASSIN OF PRESIDENT LINCOLN PROCURED PRES. BY THE MESSENGER OF SURGEON-GENERAL."

The weapon

While the revolver mentioned by Corbett was not described in detail at the trial, there seems little reason to doubt that it was the standard .44-caliber Colt "Army" revolver (Fig. 5), a percussion-cap weapon which was loaded with a substantial charge



FIGURE 4. Specimen and label of bottle containing portion of Booth's thorax. (Courtesy Mutter Medical Museum, College of Physicians of Philadelphia.)

of black powder and fired a conoidal bullet with more than enough velocity to perforate Booth's neck and vertebrae as described.¹³ Corbett² spoke of steadying his pistol by resting it on his arm, which was a popular way for cavalrymen to provide a rest for the otherwise heavy and difficult weapon. The fact that he hit Booth exactly in the spinal cord, and in the neck, was a sheer stroke of luck, considering the inherent inaccuracies of pistols and the fact that he almost certainly would have been aiming at Booth's thorax.

The question has been brought up as to whether Sergeant Corbett was actually armed with a pistol, rather than only a

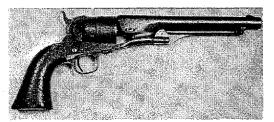


FIGURE 5. Colt .44-caliber "Army" revolver carried by Booth of type with which he was shot. (Photo courtesy National Park Service, U.S. Department of the Interior.)

carbine, which might have been the standard armament for a trooper in his military unit.¹⁴ The fact that he apparently was the sergeant in charge of the patrol and that this was a detail especially designated to undertake the capture of the man whom the whole world was waiting to see captured, certainly would have justified the additional armament.

Corbett's reason for using a pistol rather than the more accurate carbine is unexplained, but he may have felt that he could get his eye closer to the crack between the boards with the pistol, thus improving his field of vision within the barn, as he decided whether or not to shoot. Actually, if he had used his more powerful 50-caliber Spencer carbine, the wound might have been much larger than it was, as seen by the perforations in the vertebrae.

Still another argument has been raised by those who believe that Lieutenant Conger had been sent out by Stanton's Secret Service men deliberately to silence Booth, rather than to take him alive and permit him to implicate others who might have been behind the plot.¹⁵ It has been mentioned that Corbett was at the back of the barn whereas Conger, by his own testimony, was at the side of the barn, when the shot was fired. Since the bullet hole went transversely through Booth's neck, it has been argued that Conger would have been in the position to fire the bullet in such a lateral direction, rather than Corbett. One must remember, however, that Corbett stated that Booth was appearing to raise his carbine to fire toward the front door just as he was shot. Just before a man takes aim with a carbine, he ordinarily turns his body sideways toward the target, so that

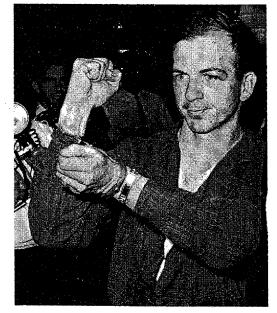
the right side of his neck might have been presented toward Corbett, for a moment, after all, as this author sees it.

At least one outstanding student, Col. J. E. Raymond,¹⁶ reasoning inferentially, agrees with Conger that Booth probably shot himself. The fact that the course of the bullet ranged slightly downward might be taken as support of this theory, but a "glance" from the bone at the point of entry into the spinal canal might also account for the direction. It is hard to conceive that Booth would not have put the pistol to his brain, however, if he did indeed intend suicide. Conger⁵ stated that he marked and unloaded Booth's carbine but did not mention examining Booth's pistols to see if one chamber had been fired. Neither did Dr. Woodward, who did Booth's autopsy, mention powder burns on the skin as from a suicide. Nevertheless, Colonel Raymond poses impressive and persuasive arguments in favor of suicide, quoting Booth's remarks "Prepare a stretcher for me," and postulating that Booth shot himself in the neck to spare his handsome face. Colonel Raymond's views will bear some further investigation, certainly.16

These arguments are in no way meant to negate the impressive circumstantial evidence that Stanton may have been behind the plot to assassinate Lincoln, as accumulated by the late Otto Eisenschiml,¹⁵ Shelton,¹⁷ Neff,¹⁸ and Roscoe,¹⁹ all quoted in *The Civil War Times* of February and July, 1965,^{14,20} which suggest that Stanton's chief of National Police Detectives, Gen. Lafayette C. Baker, may have written to Booth only one month before the assassination and may have transferred some \$16,000 to Booth in Canada via a dummy corporation in New York.

Fatal wounding of Oswald

Just ninety-eight years later, anotheraccused presidential assassin shuffled forward onto the stage of history, also surrounded by his captors, restricted by his fetters, but truculent and defiant, into a brilliant glare of light. This time the light was from television flood-lights, in the basement-garage of the Dallas, Texas, Police Department. Again, a single pistol shot rang out, and Lee Harvey Oswald



Dallas Morning News

FIGURE 6. Lee Harvey Oswald, enemy (Communist) sympathizer, who shot President Kennedy but was himself shot down by Jack Ruby two days later with Colt revolver. Oswald was restricted by handcuffs while surrounded by his captors and bathed in glare of light for television units. His pleurae, spleen, stomach, aorta, vena cava, superior mesenteric and renal vessels, kidney, liver, and ribs were all hit by single bullet, and he died about two hours later.

(Fig. 6) crumpled to the floor, ashen, with his limbs dangling loosely. Two hours later he, too, was dead, despite the heroic efforts of a skilled trauma team (Fig. 7). Here again, an attention-hungry fanatic, accused of having slain a President, had been silenced before society had had a chance to draw from him any information concerning his motives, any possible implication of higher-ups, or to bring forth any information in his own defense. This time the shooting was seen by millions, on television, so that the nation's sense of outrage and frustration was compounded a thousand times more than in the case of Booth, where the circumstances of the shooting were not so well known to the public.

Here again, the man Jack Ruby (Fig. 8), born Jacob Rubenstein, who stepped forward to do the shooting, was an unstable person, craving recognition, given to outbursts of emotion, temper, and actual violence, and chronically in trouble with the authorities.²¹ He appears to have gained



Photo by Bob Jackson (in Dallas Times Herald)

FIGURE 7. Oswald grimaces as Ruby's bullet pierces his body.

access to Oswald by energetically ingratiating himself with the crowd of newsmen, radio interviewers, and policemen who surrounded Oswald following the arrest, by bringing in sandwiches and soft drinks to distribute among the newsmen and police.^{22,23} He also posed as an interpreter for newsmen from Israel.^{22,23} Photographs from the report of the Warren Commission show Ruby in the crowd of newsmen before whom Oswald was interrogated on one or more days prior to his shooting of Oswald.²³

From this, it seems probable that Ruby had at least one even better opportunity to shoot the handcuffed Oswald during this period than he had at the moment he chose, which came after the police had been alerted to assassination attempts and were leading Oswald to an especially protective armored car in recognition of this peril.^{24,25} Similarly, Boston Corbett commented that he had had an even easier chance to shoot Booth, prior to the moment he selected.²

Like Corbett, Ruby employed a somewhat sophisticated technic, adapted to the type of weapon he used. Ruby's was a very short-barrelled revolver, of the type made for easy concealment, as in the pocket, which fired a fairly advanced type of cartridge, called a ".38 Special," now standard in most police weapons in the United States. He did not extend his arm at full length and attempt to aim his shot from a distance, as the usual amateur might, but bent his body slightly forward and advanced his shooting hand only part way, in approved



World Wide Photos

FIGURE 8. Jack Ruby, violent fifty-five-year-old nightclub operator, frequently in difficulties, who repeatedly achieved place close to Oswald by acting like reporter's assistant, before shooting him down just as he was about to be transferred to more secure quarters. Ruby presently pleading insanity in effort to escape death sentence already passed on him.

police fashion, so that the pistol would be less obvious, would be firmly held, and would be better protected from any blow from an onlooker or protector of Oswald.^{26,27} He then advanced quickly until the tip of his gun practically touched the victim and fired his single shot into Oswald's lower thorax and abdomen.

Unlike Corbett, Ruby was neither released from his imprisonment nor rewarded; no time had elapsed for a reward to be offered because of the alertness of the late Police Officer Tippitt, of the Dallas Police Force, in locating Oswald on a very inconspicuous back street near Oswald's rooming house, within forty-five minutes of the assassination of President Kennedy. It should be noted, however, that Ruby's death sentence has not yet been carried out.

Booth, of course, had made good his escape, with or without collaboration; was armed; and was at large for some twelve days before he was captured, during which time a large reward was offered for

his apprehension and during which time the temper of the nation to see him brought in, dead or alive, grew in intensity. The fact that Corbett had caused him to be brought in dead, under these circumstances, probably made Corbett's crime seem somewhat less heinous than that of Ruby, whose victim (Oswald) was thoroughly enmeshed in the due process of law at the time he was shot. The present generation of Americans was looking forward to a thoroughgoing examination of the circumstances surrounding his act, with the hope that many questions about it might have been answered.

Oswald operative findings

While Oswald was on the operating table at the Parkland Memorial Hospital, and was opened within approximately twenty minutes after the shooting, he was already in deep shock due obviously to massive internal blood loss. George Thomas Shires, M.D., Malcolm O. Perry, M.D., Robert N. McClelland, M.D., and Ronald C. Jones, M.D., opened his abdomen through a xyphoid-to-pubis midline incision at 11:44 A.M., in the same emergency suite where his victims, President Kennedy and Governor Connally, had lain two days before, and in the same hospital where Oswald's second child had recently been born. The actual account of the operation follows²⁸:

Operative record. Date: 11/24/63. Parkland Memorial Hospital

Name. Oswald, Lee Harvey

Age. Twenty-four years

Pt. No. 25260 Clinical evaluation. Previous inspection had revealed an entrance wound over the left lower lateral chest cage and a near exit was identified by subcutaneous palpation of the bullet over the right lower lateral chest cage. At the time he was first seen preoperatively, he was without blood pressure, heart was heard infrequently at 130 beats per minute, and preoperatively had endotracheal tube placed and was receiving oxygen by anesthesia at the time he was moved to the operating room. Measured blood loss: 8,376 cc.

Description of operation. Under endotracheal oxygen anesthesia, a long midline abdominal incision was made. Bleeders were not apparent and none were clamped or tied. On opening the peritoneal cavity, approximately 2 to 3 L. of blood, both liquid and in clots, were encountered. These were re-

1790 New York State Journal of Medicine / July 1, 1966

moved. The bullet pathway was then identified as having shattered the upper medial surface of the spleen, then entered the retroperitoneal area, where there was a large retroperitoneal hematoma in the area of the pancreas. Following this, bleeding was seen to be coming from the right side, and on inspection, there was seen to be an exit to the right through the inferior vena cava, thence through the superior pole of the right kidney, the lower portion of the right lobe of the liver, and to the right lateral body wall. First the right kidney, which was bleeding, was identified, dissected free, retracted immediately (sic), and the inferior vena cava was clamped with a partial occlusion clamp of the Satinsky type. Following this immobilization (sic), packing controlled the bleeding from the right kidney. Attention was then turned to the left, as bleeding was massive from the left side. The inspection of the retroperitoneal area revealed a huge hematoma in the midline. The spleen was then mobilized, as was the left colon, and the retroperitoneal approach was made to the midline The pancreas was seen to be structures. shattered in its midportion; bleeding was seen to be coming from the aorta. This was dissected free. Bleeding was controlled with finger pressure by Dr. Perry, on identification of this injury. The superior mesenteric artery had been sheared off the aorta; there was bleeding from the superior mesenteric artery. This was cross-clamped with a small curved DeBakey clamp. The aorta was then occluded with a straight DeBakey clamp above and a Potts clamp below. At this point, all major bleeding was controlled, blood pressure was reported to be in the neighborhood of 100 systolic. Shortly thereafter, however, the pulse rate, which had been in the 80 to 90 range, was found to be 40, and a few seconds later found to be 0. No pulse was found in the aorta at this time. Consequently, the left side of the chest was opened through an intercostal incision in approximately the fourth intercostal space. A Finochietto retractor was inserted; the heart was seen to be flabby and not beating at all. There was no hemopericardium. There was a hole in the diaphragm but no hemothorax. A left closed chest tube had been introduced in the emergency room prior to surgery, so that there was no significant hemothorax on the left side. The pericardium was opened, cardiac massage was started, and a pulse was obtainable with massage. The heart was flabby, consequently calcium chloride followed by epinephrine-lidocaine were injected into the left ventricle without success. However, the standstill was converted into fibrillation. Following this, defibrillation was done, using 240, 360, 500, and 750 volts, and finally, successful defibrillation was accomplished. However, no effective heartbeat could be instituted. A pacemaker was then inserted into the wall of the right ventricle and grounded on the skin, and pacemaking was

started. A very feeble, small, localized, muscular response was obtained with the pacemaker but still no effective beat. At this time we were informed by Marion T. Jenkins, M.D., the anesthetist, that there was no sign of life in that the pupils were fixed and dilated, there was no retinal blood flow, no respiratory effort, and no effective pulse could be maintained even with cardiac massage. The patient was pronounced dead at 1:07 P.M. The anesthetic agent consisted entirely of oxygen. No anesthetics as such were administered. The patient was never conscious from the time of his arrival in the Emergency Room until his death at 1:07 P.M. (He had struggled briefly in the ambulance, en route to the hospital—author.) The subcutaneous bullet was extracted from the right side during the attempts at defibrillation, which were rotated among the surgeons. The cardiac massage and defibrillation attempts were carried out by Dr. McClelland, Dr. Perry, and Dr. Jones. Assistance was obtained from the cardiologist, Fouad Bashour, M.D.--(Signed) Tom Shires.

In preparation for the operation, the superbly organized trauma group of the Parkland Hospital, who had been informed that Oswald was on his way after having been shot, had assembled a resuscitative team in the emergency operating room surgical room.²⁹ On his arrival, Dr. Akon introduced a no. 36 cuffed, endotracheal tube and connected it to the anesthesia machine for assisted ventilation and oxygen. It was obvious that the patient was in extremis as judged by his general pallor, dusky or ashen gray nail beds, cold extremities, gasping respirations, dilated pupils, and dry conjunctiva. Three members of the staff were performing venous cutdowns, one in each of the lower extremities and one in the left forearm (Charles D. Coln, M.D., Charles A. Crenshaw, M.D., and Gerald E. Gustafson, M.D.). Because of the obvious chest wound and the appearance of pneumothorax on the left, Dr. Jones inserted the chest tube and connected it to a closed water-sealed drainage bottle, as had been done in the case of President Kennedy. The head of the emergency room cart was lowered into a Trendelenburg position. There was no perceptible peripheral arterial pulsation. However, the cardioscope tracing showed an electrical cardiac activity with a heart rate of approximately 130 per minute. Blood was sent to the blood bank for immediate typing and crossmatch, and two units of uncrossmatched, type O, Rh negative blood were started by pressure infusions by plastic blood containers. William Risk, M.D., the urology resident, had inserted a Foley catheter into the urinary bladder, obtaining only a scanty quantity of urine which was not blood-tinged, despite the massive wound to the right kidney. The abdominal incision was made exactly twelve minutes after the patient first entered the emergency operating room. A vein in the right forearm was also cannulated

to aid in attempts at fluid replacement. The abdominal incision was made at 11:44 A.M., and by 12:15 P.M., he had received 3,000 ml. of blood and 800 ml. of 5 per cent dextrose in lactated Ringer solution. By 12:30 P.M., he had received 6,000 ml. of blood, and his measured blood loss was 5,000 ml., except that it was obvious that there was additional loss in the tissues. Five per cent dextrose in lactated Ringer solution was again started, and the patient's pulmonary status seemed satisfactory. At 12:37 P.M., the heart sound became weaker and the pulse rate slowed from its previously 80 to 60, 40, and then became imperceptible, confirmed by the cardioscope. By this time, the patient had received $15^{1/2}$ units of blood and 4,200 ml. of 5 per cent dextrose in lactated Ringer solution. It was judged that the period of cerebral hypoxia during the period between the gunshot wound and the time effective ventilation was started had caused irreparable damage to the cardiovascular center of the brain, introducing the final cardiac asystole, despite all resuscitative measures.

It is certainly well known to military and trauma surgeons that bullets which perforate both the aorta and the vena cava are uniformly fatal. A review of the records of the Parkland Hospital revealed that this was true in their experience also, in a long list of gunshot wounds which they have treated over the years, as the trauma center for the Dallas area.

Autopsy report

Earl F. Rose, M.D., and Sidney C. Stewart, M.D., of the Dallas County Medical Examiner's Office, performed an autopsy, no. 1163–356, on November 24, 1963, at 3:45 P.M. The relevant portions read as follows³⁰:

External examination. External examination reveals a five foot nine inch white male: estimated weight 150 pounds. Rigor is not present, slight cooling of the body. There is faint posterior mottling and lividity. The hair is brown, slightly wavy. Small amounts of dried blood in the hair which has run from the hairline to the right and backward. There is a left periorbital hematoma which is purple in the central portion, fading at the margins to a faint lemon-yellow. Total diameter of this is $1^{3}/_{4}$ inches by $1^{1}/_{4}$ inches. The irides are gray-blue, the pupils are equal at 8 ml. The sclerae and conjunctiva are not remarkable.

Various other scratches and abrasions of minor type are then described in detail.

The incisions for the insertion of the chest tube on the left, the thoracotomy for the cardiac massage, the midline laparotomy incision, and the various cutdown incisions on the limbs are next described in detail.

Twenty-three inches from the top of the head and $3^{3}/_{8}$ inches to the left of the midline anteriorly and $10^{3}/_{4}$ inches to the left of the midline posteriorly over the lower aspect of the left chest, there is an entrance-type wound which measures 1/4 by $^{5}/_{16}$ inch in diameter. This is surrounded by a contusion ring; the total diameter of the contusion ring is $3/_{8}$ inch.

Twenty-two inches from the top of the head, and $9^{3}/_{4}$ inches to the right of the midline anteriorly and $8^{1}/_{4}$ inches to the right of the midline of the back, there is a vertical 2by 1-inch gaping wound (bullet removed via this incision). Posteriorly to this by $1/_{2}$ inch, there is a $^{3}/_{4}$ - by $^{3}/_{8}$ -inch irregular contused area (this appears to be the place where the bullet had come to rest after perforating the fractured eleventh rib).

Incisions. The standard "Y" thoracoabdominal and intermastoid incisions are utilized. Reflecting the skin, there is found to be a wound between the fourth and fifth ribs which extends through the soft tissue and measures 6 inches in length. This conforms to the thoracotomy wound in the left chest. The incision is continued through the abdominal wall as well as the thoracotomy wound to the left of the midline of the chest.

Serous cavities. Examination of the serous cavities is made. In the left pleural space, approximately 175 cc. of blood. In the right pleural space, there is in excess of 600 cc. of blood. In the peritoneal cavity, there is in excess of 1,000 cc. of blood, with clot formation. In addition, there is massive retroperitoneal hemorrhage. The omentum adjacent to the transverse colon and stomach is hemorrhagic and irregularly torn.

Course of wound is followed. It is found to notch the undersurface of the seventh rib at the costochondral junction; this is surrounded by hemorrhage. In its course, it notches the diaphragmatic attachment in this region. However, the left lung is not penetrated. The course is found to go from the left to the right and backward. In its course, it is found to strike the inferior edge of the spleen, and there is a cruciate laceration of the spleen measuring approximately 1.5 by 2 The missile is found to penetrate the cm. stomach along the greater curvature of the body of the stomach, the penetration measuring 9 mm. It exits from the stomach along the posterior wall, lesser curvature, 2 cm. distal to the cardioesophageal junction. This penetration measures 8 mm. It pursues a course backward and to the right, slightly caudal to the celiac axis, and there is extensive hemorrhage in this area. The anterior and right anterolateral aspect of the aorta is torn,



FIGURE 9. Colt .38 "special Cobra" revolver with protective shroud over hammer to permit firing from inside pocket if necessary. This type pistol used to kill Oswald. (Photo courtesy Colt Manufacturing Company.)

with the superior mesenteric artery being severed. The right renal artery shows destruction and hemorrhage along the cephalad portion. The right renal vein is torn and the tear involves the inferior vena cava, the dorsal surface. It courses through the upper pole of the right kidney along the anterior surface, causing a jagged and irregular laceration covering a distance of 5 by 2 cm., with penetration into the calyces. It becomes peritonealized in the hepatorenal pouch, and there is a jagged and irregular laceration of the liver covering a distance of 9.5 by 2 by 2 cm. From the liver, it penetrates the diaphragm posteriorly on the right side. It then passes adjacent to the lung in the pleural space and the right lung is not penetrated. The eleventh rib to the right of the midline is irregularly fractured with an exit type wound in this region, and in the soft tissues along the posterior axillary line, right side, there is an incised wound and fragmentation of the rib.

The remainder of the autopsy account describes no other abnormalities, and the microscopic findings are only those of disruption and fresh hemorrhage in the areas previously mentioned. The pancreas was apparently not penetrated after all but was surrounded by hemorrhage. Its ductal system was not remarkable. The adrenal glands were both surrounded by hemorrhage, but both were intact. The brain weighed 1,450 Gm. and showed no abnormalities grossly. Further sections and special studies were to be done on it.

Ruby's weapon

The pistol employed by Ruby to shoot Oswald was a Colt revolver, caliber ".38 Special," of the model known as the

"Cobra." (Fig. 9). It had a 2-inch barrel, was of blued steel with brown plastic grips (left grip chipped), serial number 2744-LW. This pistol was equipped with a special shield for the hammer so that it could be fired from inside the pocket, if necessary, with the shield protecting the hammer from being caught in the cloth lining of the pocket.³¹ A "piece" (gangland parlance for a firearm) with such a short barrel is notoriously inaccurate, except at point-blank range.

The fact that Ruby was able to kill his man with a single bullet from his Colt pistol was surprisingly analogous to the success of his historical predecessor, Boston Corbett (or perhaps Booth himself, if it was indeed suicide, as Raymond¹⁶ believes), in slaying Booth with a single shot, probably also from a Colt pistol, nearly a hundred years earlier. The fact that Ruby struck both the vena cava and the aorta; detached the superior mesenteric artery; perforated the right renal artery and vein, as well as the spleen, the stomach, the right kidney, and the liver; and holed the pleura in the costophrenic angle both anteriorly and posteriorly, is nothing short of remarkable. It was probably even more lethal than if he had struck Oswald directly in the heart. The fact that it struck a rib and cartilage anteriorly and the eleventh rib posteriorly was probably the only reason that it did not exit from the body and strike some of the police officers standing directly behind and to the right of Oswald. It was equally remarkable that Corbett's one bullet hit Booth exactly in the spinal cord. The fact that Ruby did not get off additional shots resulted from the alacrity and vigor with which the policemen in the room seized his gun and gun hand and wrestled him to the floor. Their grip on the gun probably immobilized the cylinder so that it could not turn again, and the weight of the several men who could be clearly seen to jump on Ruby, in the television films, probably prevented him from firing more shots.

Ruby reported that he had purchased the gun about three years before, for the purpose of protecting himself because he carried considerable amounts of cash in the transaction of his night club business. He ordinarily carried it in the trunk of his car, which he also used as his temporary bank. Ruby is quoted by Police Officer McMillin, who helped subdue him, as saying to Oswald: "You rat, son of a bitch, you shot the President," and then firing his shot. During the scuffle to subdue him, he quoted Ruby as saying repeatedly, "I hope I killed the son of a bitch." When Ruby was told Oswald would probably die, Ruby then said, "I meant to shoot him three times but you police moved too fast and prevented me from doing so."³²

Summary

John Wilkes Booth and Lee Harvey Oswald were both shot down deliberately, while confined, in the glare of bright lights provided by their captors and by persons acting against orders or against the law. Booth was restricted by his broken leg and Oswald by his handcuffs. Both men who were accused of shooting them were later characterized as insane and were remarkably similar in many ways. Each man bided his time before firing his shot, and the technic of both appeared to reveal a certain degree of expertise in the way in which they handled their weapons. While both shootings may well have been the actions of excited men in attacking what they considered to be a national enemy, there are many sophisticated observers who regard this point of view as being unduly naïve. They believe that since both accused presidential assassins were active enemy sympathizers (Booth for the Confederacy and Oswald for the Communists),33,34 and since both shootings took place during an era of large-scale undercover operations, psychological persuasion, philosophic rivalry, and intelligence activity, that both men may have been silenced as part of a larger design.

It is interesting that information is now being put forth which suggests that Booth was on the payroll of a "dummy" company in New York City which was a "front" for the "undercover" operations of Gen. LaFayette C. Baker, chief of the National Police Detectives, which was Secretary of War Stanton's "secret police" type of operation during the Civil War.¹⁷⁻¹⁹ Furthermore, the compendium of circumstantial evidence accumulated by the late Otto Eisenschiml¹⁵ makes wonderful reading and made him firmly of the opinion

that Stanton encouraged the plot to assassinate Lincoln.

Both presidential assassins were strange, compulsive men, repeatedly in trouble with the authorities over a succession of minor infractions.

In any case, against this background of similar features, it is no less than amazing that each of the accused presidential assassins, Booth and Oswald, was successfully killed each by a single bullet probably fired from a Colt revolver. Both men lingered for about two hours before dying. As most military and accident room surgeons know, a great many pistol bullets are fired into people without hitting any structure which would bring about such rapid deaths.

The similarities in these two fatal woundings merely add to the striking number of other coincidences which continue to appear in the histories of the assassinations of two of our martyred presidents, Abraham Lincoln and John F. Kennedy.

620 West 168th Street

References

Ruby present at Oswald press conference, in Warren Commission Hearings, Washington, D.C., U.S. Government

Commission treatings, washington, D.C. Government,
 Printing Office, 1964, vol. 19, p. 634.
 Sergeant Boston Corbett: in Pitman, B.: Assassination of President Lincoln and the Trial of Conspirators,
 New York, Moore, Wistach, and Baldwin, 1865, p. 94.
 Johnson, B. B.: Abraham Lincoln and Boston Corbett

bett, Boston, Lincoln and Smith Press, 1914

Herring, A. L., Jr., and Pricks, 1914.
 Herring, A. L., Jr., and Prichard, R. W.: Curse of Cain, Surg. Gynec. & Obst. 93: 651 (1951).
 Conger, E. J.: in Trial of John H. Surratt, the Criminal Court of the District of Columbia, Washington, D.C., U.S. Government Printing Office, 1867, p. 91.

 Barnes, J. K.: in *ibid.*, p. 95.
 May, J. F.: The Mark of the Scalpel, Records of the Columbia Historical Society, Washington, D.C., 1910, vol. 13, p. 51.

8. Eisenschiml, O.: In the Shadow of Lincoln's Death,

New York, Wilfred Funk, Inc., 1940, p. 36.
Shettle, J. W.: John Wilkes Booth at school, N.Y.
Dramatic Mirror, (Feb. 26) 1916; Baker, L. C.: History of the United States Secret Service, Philadelphia, 1867, p. 505.
Woodward, J. J.: Booth autopsy report, Medical and Surgical History of War of the Rebellion—Part I: Surgical Volume W44, Washington, D.C., Surgeon-General's Office 1875 p. 452 Office, 1875, p. 452.

Schaeffer, E. M.: in Lamb, D. S.: 11. Washington Medical Annals, a history, Washington, D.C., Army Medical Museum, January, 1916, vol. 15, p. 31. 12. Purtle, H. R.: Lincoln memorabilia in the medical museum of the Armed Forces Institute of Pathology, Bull.

Hist. Med. 32: 68 (1958).

13. Peterson, H.: National Park Service, Washington,

D.C., personal communication, 1964. 14. Fowler, R. H.: Album of the Lincoln Murder, Civil

Fowler, R. H.: Album of the Lincoin Murder, Civil War Times, Gettysburg, Pennsylvania, July, 1965, p. 49.
 Eisenschiml, O.: Why Was Lincoln Murdered?, Boston, Little, Brown and Company, 1937.
 Raymond, J. E.: Personal communication, Jan.

1966.

17. Shelton, V.: Mask for Treason, 1965.

18

Neff, R.: Civil War Times, Aug. 1961. Roscoe, T.: The Web of Conspiracy, 1959. Shelton, V.: in Fowler, R. H.: Civil War Times, 19.

Gettysburg, Pennsylvania, Feb. 1965, p. 4.

21. Argests and violations of Jack Ruby, in Warren Re-ort, Washington, D.C., U.S. Government Printing Office, 21. 1964, p. 779. 22. Ruby bringing in food and posing as an interpreter, in

 Warren Commission Hearings, Washington, D.C., U.S.
 Government Printing Office, 1964, vol. 19, pp. 635, 645.
 Ruby posing as a reporter, in Warren Report,
 Washington, D.C., U.S. Government Printing Office, 1964 p. 341.

24. Ruby stood near Oswald at press conference, in Warren Commission Hearings, Washington, D.C., U.S. Government Printing Office, 1964, vol. 19, pp. 634, 640; vol. 25, p. 176.

Photographs of Ruby in police headquarters on night of November 22, near Oswald, in Warren Commission Pro-ceedings, Washington, D.C., U.S. Government Printing Office, 1964, vol. 25, pp. 524, 570.

Office, 1994, Vol. 25, pp. 524, 570.
26. Police warned Oswald would be shot, in Warren Commission Hearings, Washington, D.C., U.S. Government Printing Office, 1964, vol. 19, p. 770.
27. Ruby crouched over his gun, in *ibid.*, vol. 19, p. 388.
28. Operative report on Oswald, in *ibid.*, vol. 17, p. 21.
29. Resuscitation efforts for Oswald, three patients at Parkland Toras. J Med 60: 72 (Jan) 1964

Parkland, Texas J. Med. 60: 72 (Jan.) 1964.

Parkiand, Pexas J. Med. 60: 72 (Jan.) 1964.
30. Oswald autopsy report, in Warren Commission Hearings, Washington, D.C., U.S. Government Printing Office, 1964, vol. 26, p. 521.
31. Ruby's pistol, in *ibid.*, vol. 25, p. 520.

Ruby meant to shoot three times, ibid., vol. 25, p. 32.

408. 33.

Oswald revokes his U.S. citizenship, in ibid., vol. 26, p. 684. 34.

Oswald pledges allegiance to USSR, in *ibid.*, vol. 18, p. 97.