

Historical vignette

Patton: death of a soldier

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✓General George S. Patton Jr. died as the result of quadriplegia sustained in a car crash in Germany in 1945. His x-ray films revealed a fractured C-3 vertebra and a posterior dislocation of C-4 on C-5. The likely cause of death was a pulmonary embolus. Details of his medical treatment are reviewed and compared with therapies that a patient with a similar injury would receive today. (DOI: 10.3171/JNS.2008.108.2.0402)

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FOR George S. Patton Jr., General of the US Army (Fig. 1), 1945 was a year of triumph and tragedy. He had assumed command of the US Third Army in August 1944, was involved in the breakout from the hedgerows of Normandy, and soon thereafter sped eastward through Metz and across France into the Saar Basin. Military operations were set back during December 1944 by the surprise German counter-offenses in the Battle of the Bulge. In January 1945, Bastogne was recaptured, and the Third Army headed eastward, again at lightning speed, entering Germany in February 1945 and crossing the Rhine itself in March. They then pushed farther eastward into Czechoslovakia, just short of Prague, but at that point they were ordered to hold back by prearrangement between Allied headquarters and the Soviets until the Germans surrendered on May 9, 1945. It was a stunning achievement, which was contributed to in no small part by Patton and the Third Army.

Command of an army in wartime was an assignment for which Patton had trained all his adult life and for which he was eminently suited. With victory and the German surrender, he assumed a completely different role as “viceroys” of Bavaria, a position for which he was unprepared both intellectually and temperamentally. His zone of occupation encompassed an area of ~ 25,000 square miles, > 7 million Germans, 2 million displaced persons, and the Third Army of ~ 500,000 men. As one of his staff officers said, “Instead of killing Germans, the job was now to govern them . . . and to guide his late enemy into paths of sweetness and light.”¹

After the European victory, Patton had hoped to be sent to Japan, but MacArthur vetoed the idea. One prima donna in the Pacific was more than enough, and the Japanese surrender in August 1945 rendered the point moot. Thereafter, Patton lobbied for specific commands in the US, but these

assignments were given to others and he remained in Germany.

Patton exhibited a laissez-faire attitude toward the implementation of orders to effect denazification. He said, “It is no more possible for a man to be a civil citizen in Germany and not have paid lip service to Nazism than it is for a man to be a postmaster in America and not have paid at least lip service to the Democratic Party or the Republican Party when it is in power.”⁴ Not to have understood the moral differences between Nazism and American political affiliations was a factor that led to Patton’s eventual downfall. This attitude was coupled with contempt toward the displaced persons and refugees from the concentration camps.^{2,3}

These issues, coupled with Patton’s failure to adequately administer the directives for denazification in Bavaria and his intemperate remarks, forced Eisenhower in September 1945 to relieve Patton of the command of his beloved Third Army and to assign him command of the Fifteenth Army, essentially a paper force charged with studying the lessons of the European campaign. He assumed this new command, but despite receiving numerous honors, tributes, and medals, he was tired, dispirited, and had had enough of Europe and the postwar scene. Orders came for him to return to the US, and he was scheduled to leave Bad Nauheim on Monday, December 10, 1945.

The Accident: Sunday, December 9, 1945

On the cold, dark Sunday morning of December 9, 1945, General Patton, accompanied by his chief of staff, General Hobart (Hap) Gay, set out from Bad Nauheim for a day of pheasant hunting. Patton’s limousine was a sturdy 1938



FIG. 1. Photographs depicting General George S. Patton Jr. with General Geoffrey Keyes in 1944 (*upper*, image courtesy of Patton Museum of Cavalry and Armor, Fort Knox, Kentucky) and General Eisenhower in 1945 (*lower*, image reprinted with permission from Carlo D'Este).

Cadillac emblazoned with the highly polished 4 stars of a general (Fig. 2). It had been built for 7 passengers, with a distance of 6 ft from the partition behind the driver to the rear of the back seat. At ~ 11:45 a.m., the car was traveling on the autobahn through Kaefertal, on the outskirts of Mannheim. Patton sat in the right rear seat, and Major General Gay sat next to him. The limousine stopped briefly at a railroad crossing and then proceeded. Six hundred yards farther, it was struck in the right front fender by a GMC 2.5-ton truck¹ coming from the opposite direction and making a sudden left turn.

Neither vehicle was traveling more than 20–30 mph at the time of the crash. Although the limousine was forced off the road and down an embankment, it sustained only minor damage to the front fender. Nonetheless, Patton, who

had been sitting on the edge of his seat, was propelled forward, causing him to smash his forehead and the bridge of his nose forcibly against the steel frame of the partition behind the driver. Neither the driver nor General Gay was injured. Patton, however, sustained a ragged, deep laceration across his forehead and had neck pain, difficulty breathing, and an inability to move his arms and legs. “I believe I am paralyzed,” he said. “I am having trouble in breathing. Work my fingers for me. Take and rub my arms and shoulders and rub them hard.”²

An ambulance was summoned immediately and arrived within minutes. The medical officer, Captain Ned Snyder, found Patton motionless in the back seat. A decision was made to bypass Mannheim and take Patton to the new Seventh Army Hospital in Heidelberg, ~ 20 miles away.



FIG. 2. Photograph of the limousine in which General Patton was fatally injured. Image courtesy of Patton Museum of Calvary and Armor, Fort Knox, Kentucky.

Hospital Treatment, Heidelberg

Patton was carried on a stretcher into the 130th Station Hospital, formerly the barracks of a German cavalry unit, at ~ 12:45 p.m. on December 9. He was fully conscious but pale, cyanotic, and dyspneic. His blood pressure was 86/60, and his pulse was 45. Over the next several hours he received transfusions of 300 ml of whole blood and 1500 ml of plasma. Later that afternoon, his blood pressure was 110/76. Starting after 1:00 p.m., an examination by Lieutenant Colonel Paul Hill, chief of the surgical service, revealed flaccid paralysis below the neck with loss of sensation beginning 1 in below the clavicle.

A portable x-ray machine was carried down from one of the upper floors (there were no elevators).⁵ Patton's clothes were cut and removed. Radiographs revealed a fracture of C-3 and a posterior dislocation of C-4 on C-5. His forehead laceration was cleaned and sutured, and a bladder catheter was inserted. Observing that everyone was clearly intimidated by his rank and reputation, Patton smiled and said, "Relax, gentlemen. I'm in no condition to be a terror now." A few minutes later he added, "Jesus Christ, what a way to start a leave." When he was informed that the chaplain had arrived, he said, "Well, let him get started; I guess I need it."¹

Major General Albert Kenner—chief surgeon of the European Theater, an old friend of Patton, and Patton's chief medical officer in Morocco in 1942—was notified. By 2:30 p.m., Kenner, Colonel Earl Lowrey (chief surgical consultant of the European Theater) and Captain William R. Duane Jr. (a neurosurgeon) flew from the Army Hospital in Frankfurt to assess the situation.¹⁻³ Crutchfield tongs were applied, additional radiographs were obtained, and penicillin was administered. Lieutenant General Geoffrey Keyes, one of Patton's oldest friends, who had served as his deputy commander in Sicily and was currently stationed nearby as commander of the Seventh Army, was put in charge of all nonmedical administrative issues.²

Realizing the gravity of the situation, Kenner telephoned the surgeon general's office in Washington, D.C. It was decided to contact Colonel R. Glen Spurling (Fig. 3), the chief neurosurgical consultant of the European theater, who



FIG. 3. Photograph showing R. Glen Spurling in full military dress at an army ceremony between 1942 and 1946. He may have been receiving the Legion of Merit medal in 1945, and the other individual in the photo may be a Major Kirk. Image from the R. Glen Spurling, M.D., Papers, RG 182, courtesy of the Kornhauser Health Sciences Library, University of Louisville, Kentucky.

was on leave preparing for his imminent discharge and return to the US. The surgeon general also authorized Kenner to contact the War Office in London and ask for the loan of Brigadier Sir Hugh Cairns (Fig. 4), the Nuffield Professor of Surgery at Oxford and the chief neurosurgical consultant of the British Army. Cairns agreed to come, and an army plane was dispatched to pick him up in London. Late on the morning of Monday, December 10, Cairns, accompanied by Lieutenant Colonel Gilbert Phillips, arrived in Heidelberg.

Although Cairns confirmed the diagnosis of quadriplegia below C-4, there was some questionable motion in the right hand and possibly some sensation on tapping the right patella. Cairns held out the possibility that there might be a severe, but not complete, spinal cord injury. A recurring problem in the treatment was slippage of the Crutchfield tongs, presumably because of the shape of Patton's head. Cairns' solution was, after applying a local anesthetic, to insert fishhooks, purchased in a local sporting goods shop, beneath the zygomatic arches bilaterally. Ten pounds of traction was applied. Although these hooks were uncomfortable, subsequent radiographs revealed good alignment of the vertebrae. Otherwise, there was no significant change in the patient's status. Cairns monitored the patient until Colonel Spurling arrived.

When the surgeon general's office was informed of Patton's accident on December 9, they attempted to find Colonel Spurling. He was on a 3-day leave in Louisville, Kentucky, making arrangements for his return to practice after demobilization from the army later that month. On the af-



FIG. 4. Photograph showing Brigadier Sir Hugh Cairns. Image courtesy of the Neurosurgery Department of Oxford Radcliffe Hospitals, Oxford, United Kingdom.



FIG. 5. Photograph depicting George and Beatrice Patton, 1942. Image courtesy of the US Army.

ternoon of December 10, he was returning to Washington, D.C., by train. Between Louisville and Cincinnati, he was paged and told that an urgent message awaited him on his arrival to Cincinnati. On the platform in Cincinnati, he was handed a telegram from the adjutant general stating, "You will . . . proceed to the airport . . . where an army plane will fly you to Washington, hence to Germany."²²

In Washington, D.C., Spurling received some details of Patton's accident. At the airport, he met Mrs. Patton (Fig. 5), who had been flown from Boston to travel with him to Germany, and the party boarded a C-54 transport plane. On the long transatlantic flight via Gander and the Azores, it was learned that severe storms were battering Europe. The plane was unable to land in Paris because of fog and rain but proceeded to Marseilles, and the party then traveled by car to Heidelberg.

The transatlantic journey had taken more than 24 hours. Between the Azores and France, Spurling received the first detailed report on Patton's condition, which, coupled with the dismal weather conditions, caused him to write, "I had doubts over the wisdom of risking the lives of ten perfectly healthy people, three passengers and a crew of seven, in order to get to the bedside of a man who probably had no chance at all to survive."²³

Spurling arrived at the hospital late on the afternoon of Wednesday, December 12. Patton's vital signs were stable.

He had been intermittently febrile, but his temperature was now 100°F. "Colonel Spurling," Patton said in greeting, "I apologize for getting you out on this wild goose chase, and I am particularly sorry since this means you will not be home with your family for Christmas." Later, he remarked, "This is an ironical thing . . . after the best of the Germans have shot at me, then to get hurt in an automobile accident going pheasant hunting."²²

The news of Patton's accident had been released, and get-well messages flooded in from a variety of individuals including President Truman, Winston Churchill, King George VI, General Eisenhower, and Field Marshall Montgomery.

Patton was comfortable, reporting no pain other than "the persistent drag at the site of the traction in my skull." Neurological examination revealed complete paralysis except for some voluntary motion of the right biceps muscle and a feeble deep sensation in both arms and, questionably, both legs. Deep tendon reflexes were hyperactive in both lower extremities. His fragmentary improvement was not sustained, and on the morning of December 13, his breathing was more labored, and there were indications that the right diaphragm was paralyzed. Patton called Spurling in for a frank, private talk.¹

"Now Colonel, we've known each other during the fighting, and I want you to talk with me as man to man.

What chance have I to recover?"

Spurling was evasive and told him that it was impossible to give a forthright answer. If the cord was severed or severely damaged at the moment of impact, the chance of recovery would be very slight. However, if the cord was only shaken up, there could be dramatic improvement in the next 48–72 hours.

Patton, who was an accomplished equestrian, asked, "What chance have I to ride a horse again?"

"None," Spurling replied.

"In other words," Patton shot back, "the best that I could hope for would be semi-invalidism."

"Yes," Spurling answered.

"Thank you, Colonel, for being honest." Patton then ordered Spurling to be in complete charge of his medical affairs.

Over the next several days, Patton's condition did not change appreciably. He ate some soft solids and took fluids in small amounts. He was intermittently restless, occasionally depressed, and periodically confused. Because of the bladder catheter, streptomycin was prescribed. This antibiotic had just recently been discovered and was not available in the European theater. Spurling arranged for it to be flown from Washington, D.C., to Frankfurt and then transported under military escort to Heidelberg.

On Monday, December 17, the fishhooks were removed after radiographs revealed near-perfect alignment. Patton was fitted with a plaster collar and could be positioned in a 45° raised position. Examination revealed slight voluntary movements of the left quadriceps, right abductor, and right biceps muscles. Spurling cabled Lieutenant Colonel Michael DeBakey in the surgeon general's office: "Arrangements being made air evacuation General Patton, 30 December."³

During the night of December 19, Patton had a violent coughing spell; he became dyspneic and cyanotic. The cough had produced frothy, blood-tinged sputum, and the possibility of a pulmonary embolus was raised. He was given oxygen and atropine. Another episode of coughing with blood-tinged sputum occurred on the afternoon of December 20, accompanied by a rapid pulse, falling blood pressure, and cyanosis. Chest x-ray films revealed some infarction of the upper portion of the right lung.^{2,3}

Thereafter, Patton received supportive care: oxygen, digitalis, intravenous fluids, and plasma. He was intermittently awake but was sleeping more and was increasingly confused. Mrs. Patton, who had remained at his bedside for most of the daylight hours since her arrival 1 week earlier, was reading to him at ~ 4:00 p.m. on December 21 when he said to her, "It's so dark . . . It's so late."³ He died at 5:45 p.m. at the age of 60 years.

Colonel Spurling requested an autopsy, but Mrs. Patton refused. She wished the body to be taken back to the US and buried in the family plot outside of Boston. Arrangements were nearly completed when General Keyes approached Colonel Spurling saying, "There hasn't been an American soldier, whether enlisted man or officer, taken home for burial since the beginning of the war. I am fearful of the adverse reaction . . . if we make an exception in General Patton's case."³

Because of his long friendship with the Pattons, Keyes felt uncomfortable raising this issue with Mrs. Patton and asked Spurling to address the matter with her. Mrs. Patton

agreed immediately. "Of course . . . George would want to lie beside the men of his army who have fallen."³

Spurling subsequently wrote, "Patton died as he had lived—bravely. Throughout his illness there was never one word of complaint regarding a nurse or doctor or orderly. Each and every one was treated with the kindest consideration. He took orders without question—in fact he was a model patient."¹

On December 24, 1945, General Patton was laid to rest in the American Military Cemetery at Hamm just east of Luxembourg. Mrs. Patton insisted that Colonel Spurling return to the US as soon as possible after the general's death, and he was not present for the funeral or burial.

Discussion

Patton, the General

At a West Point reunion sometime after the war, a reporter, passing the statue of Patton, remarked to Eisenhower that "General Patton was quite a legend." Eisenhower replied, "Yes, mostly a legend."⁴ Was he a legendary military leader in the mold of Napoleon or Robert E. Lee, or were his accomplishments overblown by a press corps eager to find and/or create a heroic figure in the dark days of World War II?

Surely, Patton was almost perfectly scripted for the latter role. Tall, distinguished-looking, flamboyant, aggressive, profane, and easily quotable, he personified an image cherished in America—the free-spirited, self-reliant, gun-toting, take-no-prisoners, law-enforcing man of the west—a throwback to Daniel Boone, Wyatt Earp, and a hundred Hollywood movies.

He truly loved war. Not the death and destruction, concentration camps, ruined cities, and loss of his soldiers—even the sight of the bodies of his enemies saddened him—but he loved the excitement of war, the prerogatives of his position, and the opportunities to put into practice the leadership qualities and courage that he had fashioned over many years.

As a leader he was complex—a mélange of childishness, impatience, and insecurity. He was jealous of his contemporaries and superiors, vain, and insular. He was a romantic, hardly an intellectual, but a devoted reader of military history who carried with him throughout the European campaign the detailed exploits of Caesar and Napoleon, both of whom had operated in much of the same terrain. Most importantly, he was a leader of men. In the words of General Jacob Devers, he possessed "that power to make soldiers follow him anywhere."¹

The Treating Physicians

Sir Hugh Cairns⁷ and Glen Spurling⁸ both belong in the pantheon of great neurosurgeons of the 20th century.

Hugh W. B. Cairns (1896–1952). Cairns was born in Port Pirie, South Australia, and entered medical school at Adelaide at 15.5 years of age. In 1915, he interrupted his medical studies to join the Australian Medical Corps as a private. After the disaster at Gallipoli, his unit was evacuated to Egypt and then to Sydney. He completed his medical studies at Adelaide in 1917 and was commissioned a captain in the Australian Army Medical Corps from 1917 to

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1919. In January 1919, he entered Balliol College, Oxford, United Kingdom, as a Rhodes Scholar.

After 6 months at the Radcliffe Infirmary as a house surgeon, Cairns began a long connection with London Hospital, first in pathology and later in surgery. He became a Fellow of the Royal College of Surgeons in 1921 and reached consultant status in 1926.

In September 1926, Cairns obtained a Rockefeller fellowship to go to Boston and work as an assistant resident in neurosurgery at the Peter Bent Brigham Hospital under Harvey Cushing, whom he had met in England. On returning to London in 1927, he established a thriving neurosurgical practice until 1938, when he was appointed as the first Nuffield Chair of Surgery at Oxford and the Radcliffe Infirmary. During the latter part of 1938, Cairns, who had been a consultant to the War Office, rose to become a brigadier in the army. Cairns had an abiding interest in head injuries, having been one of the physicians attending Colonel T. E. Lawrence (Lawrence of Arabia), who was fatally injured in a motorcycle accident in 1935.⁶ Thereafter, he was instrumental in devising a helmet for motorcyclists that was introduced to the Armed Forces in 1941. Cairns returned to the Radcliffe Infirmary after the war, where he became interested in psychosurgery. He died of abdominal cancer at the age of 56 years in 1952.

R. Glen Spurling (1894–1968). Glen Spurling was born in Centralia, Missouri, in 1894. He attended the University of Missouri and Harvard Medical School, graduating from the latter in 1923. He spent 2 years as a surgical house officer at the Peter Bent Brigham Hospital but had little contact with Cushing, who was then chief of surgery. He did not apply for a position with Cushing but went to the University of Louisville in Kentucky as the chief resident in surgery. One year later, he created the first neurosurgical service at that institution. He had no formal training in neurosurgery but made frequent visits back to Boston to observe Cushing.

In 1931, with van Wagenen, he suggested the creation of a new neurosurgical society; and in 1932, the Harvey Cushing Society (later the American Association of Neurological Surgeons) was formed, with Spurling as its first secretary (1932–1933) and second president (1934–1935). He joined the US Army soon after the bombing of Pearl Harbor in December 1941. He was appointed the assistant chief of surgery at Walter Reed Hospital in charge of all neurosurgical patients and had ~ 100 patients under his supervision. In 1944, Spurling was transferred to the European theater with the rank of lieutenant colonel and was stationed in London as the neurosurgical consultant to the armed services.

After demobilization from the army in 1945, Spurling returned to Louisville, where he was involved in medical practice, teaching, and training. He became interested in psychosurgery. In 1947, he experienced the first of 3 heart attacks, which forced him to slow down. He remained active as a senior consultant to the Veterans Administration, but illness made him retire in 1961, and he died in 1969 of “heart failure” in La Jolla, California.

Treatment of Cervical Spinal Cord Injuries in 1945 and a Half-Century Later

It is interesting to examine the story of Patton's injury

and treatment in the light of the current management of traumatic cervical spinal cord injuries, especially those that occur in wartime conditions. Might the outcome have been different if Patton had been treated now, rather than in 1945? Although stabilization of the osseous structures surrounding the traumatized cord and ancillary methods to prevent or mitigate the secondary effects of cord injury have improved, we are not much further along today than we were in 1945 in restoring function to a severely compromised spinal cord.

Although Patton's accident occurred while he was on military duty, it did not happen under battlefield or hostile conditions. Given the locale and certainly abetted by the fact that the injured party was a distinguished 4-star general, help, including top-flight neurosurgeons, was available almost immediately, and Patton was transported by ambulance to a fully staffed hospital, arriving ~ 1 hour after the accident. Although helicopters and emergency medical assessment and evacuation teams are now frequently utilized in similar situations, no significant time was lost in getting Patton to the hospital. Trained personnel immediately assessed his condition, and shock due to blood loss and spinal cord injury was promptly treated. His neck had been immobilized. Radiographs revealed a cervical fracture and dislocation, and Crutchfield tongs were applied. Today, a patient would likely receive methylprednisolone immediately after arriving at the hospital. The value of this agent is still highly questionable, and, of course, steroids were not available until after World War II.

Today, a patient would be taken to an intensive care unit and assessed with computed tomography and magnetic resonance imaging rather than with plain and, in Patton's case, portable radiography. These studies of the cervical spine would have provided definitive data on the type and extent of cervical spine and cord injury, including any evidence of cord pressure from bone, blood clots, or herniated discs.

Given a fracture of C-3 and posterior dislocation of C-4 on C-5, immediate treatment would involve realignment with cervical traction provided that there was no compromise of the spinal canal by a herniated disc fragment. In Patton's case in 1945, once realignment had been accomplished, treatment consisted of maintaining the status quo and monitoring vital functions while observing and hoping for signs of recovering spinal cord function. Now, if imaging studies reveal evidence of continuing pressure on the spinal cord and if the patient's general condition is satisfactory, an operative procedure probably would be performed anteriorly and/or posteriorly to release the pressure on the cord and stabilize the skeletal elements using hardware and bone for eventual fusion. If imaging studies reveal excellent alignment and no pressure on the cord, the decision would be whether to maintain stabilization with some form of halo-vest apparatus until fusion took place or intervene operatively with internal fixation, fusion, and early mobilization.

In Patton's case, Crutchfield tongs were applied but subsequently discarded because they kept slipping. It was necessary to devise another method of skeletal traction. Cairns inserted fishhooks beneath the zygomatic arches after applying a local anesthetic to Patton. Although primitive by current standards, the tactic succeeded in securing and maintaining cervical spine alignment until a plaster collar could be applied and the fishhooks removed.

One striking difference in the treatment of acute spinal cord injuries half a century ago compared with now pertains to the prevention of pulmonary emboli, always a major concern and a probable cause of Patton's death. In our present armamentarium are intermittent pressure stockings, anticoagulants (usually subcutaneous heparin or enoxaparin), and various inferior vena cava filters; all were developed after World War II. Had these adjuvant therapies been available, this complication might well have been averted.

It is impossible to know whether Patton would have regained any significant spinal cord function had he not died of pulmonary emboli. Both Spurling and Cairns noted occasional fragmentary movements in Patton's extremities, but the fact that he experienced instantaneous, virtually complete midcervical quadriplegia involving at least 1 diaphragm suggests that the chances of eventual significant recovery were dim, and the possibility of some other dire complication such as pneumonia or sepsis was not insignificant.

One lesson of major present-day significance can be derived from the story of this historical accident. It represents the "poster-boy case" for the use of seat belts in automobiles. At the time of the accident, both vehicles were traveling at modest speeds, perhaps 20–30 miles per hour. There was no damage to the truck and only minimal damage to the limousine. Of the 4 passengers in the 2 vehicles, only Patton was injured. His head injury occurred because he was sitting unrestrained on the edge of his seat, oblivious to the oncoming truck. At the time of impact, he was propelled forward, smashing his forehead against a steel partition and hyperextending his neck. Had he been using a seat belt (and, unfortunately, seat belts still are not used frequently enough today, especially in back seats), this devastating injury most likely would not have occurred.

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