

Following the battle of Gettysburg in July 1863, Chamberlain suffered from "neurasthenia" or Civil War illness syndrome (the modern day equivalent of posttraumatic stress disorder). In November of the same year, he contracted typhoid fever whose severe respiratory symptoms caused him to take a long sabbatical. During his recovery in the winter of 1864, he was given administrative duty on a court martial board. As his health improved, he could no longer stand this idle life and yearned to return to battle. His wish was granted in April 1864 when he was appointed brigade commander of the 1st Brigade, 1st Division, 5th Corps of the Army of the Potomac which was about to embark with Grant and Meade on the Overland Campaign.



Following the battles of the Wilderness, Spotsylvania, and Cold Harbor, the Union army campaign focused on the siege of Petersburg, Virginia, which was considered the door to Richmond, the rebel capital. Here the Confederate army was deeply entrenched for its defense. Chamberlain's brigade found itself at the Union front at a place called Rive's Salient on June 18, 1864. Chamberlain was given the command to attack and, although accustomed to following orders, on this day he was hesitant. He reported back to his superiors: "I am advanced a mile beyond our own lines in an isolated position. In front of me at close range is a strongly entrenched line of infantry 3,000 strong with projecting salients to my left and right, such that my advance [will] be swept: by a constant cross fire. Despite these adversities, Chamberlain was ordered again to attack.

While turning to his right to direct an oblique movement of his advance, Chamberlain felt a burning in the right hip. A Confederate soldier shot missed, but the bullet ricocheted upward off a rock and struck Chamberlain in the right pelvis. The examining surgeon's report described that the ball entered from the front and a little below the right hip, then passed obliquely upward through the bladder and emerged in the rear of pubic area near the head of the femur (thigh bone). The minie ball used at this time produced a ghastly aperture rather than a neat little hole. Surgeons of the day noted that "interior human organs tended to be torn apart by minie ball's hot path".

Fearing that his men would lose heart, Chamberlain jammed his saber into the ground as a makeshift cane to help him remain upright. As blood ran down both legs and filled his right boot, weakness overcame his willpower and he fell to the ground. His artillery commander, while observing the day's action through field glasses, noticed Chamberlain fall to the ground and dispatched 4 men with a stretcher. Convinced that the wound was fatal, Chamberlain pleaded with them to take care of the other men who were wounded. When a nearby shell burst covered them with mud however, all discussion ended and Chamberlain was carried off the field. Chamberlain's blood pooled for nearly an hour into the clay soil, causing him to joke in later life that "I am not of Virginia blood, but she is of mine."

By the time he reached the field hospital 3 miles to the rear, several hours had passed. The minie ball had entered the right hip, severed arteries, fractured the pelvic bone and injured Chamberlain's bladder. The prognosis was grim. Civil War surgeons were skilled at removing limbs for extremity wounds, but "gut wound" soldiers were left to die. Word of the injury reached Chamberlain's brother Tom who was still in the 20th Maine regiment. Tom recruited 2 men to join him searching field hospitals during the night until they found his brother.

By this point the surgeons had begun an unprecedented open wound surgery on Chamberlain in the field hospital with him receiving morphine and chloroform sedation. Halfway through the operation, even with the sedation, the pain became sheer torture for Chamberlain and the surgeons laid down their instruments, thinking that Chamberlain's agony had gone on long enough and that he should be left to die without further pain. However, a groggy Chamberlain encouraged them to continue and they did, reconnecting severed urinary organs and removing the minie ball that had done so much damage. Hope for recovery was non-existent as, shortly after finishing, the exhausted surgeons noted that the surgery had not completely closed, and that urine was still exiting from it.

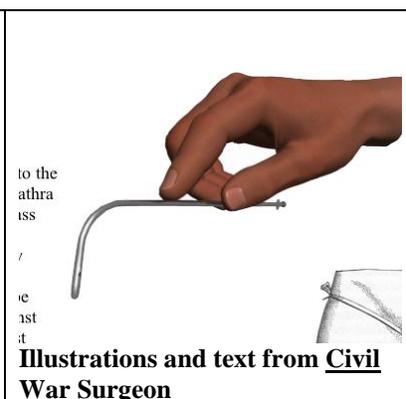
To understand the extreme circumstances under which this procedure was attempted one must have some Civil War medical background. Field hospitals, although sometimes located in houses, barns, or shacks, were often located outdoors in tents amidst rain, heat, flies, and stifling humidity. Coughing, groaning and filthy men with fresh amputations were scattered about the place. The instruments used for one surgery were the same as those used for

another conducted minutes before with the attending surgeons simply wiping off blood from the first surgery on his apron before proceeding to the next. These surgical instruments were rudimentary at best and consisted of items easily found today in kitchen drawers. All of these procedures were performed in an age without antibiotics, sterile preparations, efficient sutures, drains, or virtually any modern surgical conveniences. In Chamberlain's surgery, anesthesia was apparently limited as evidenced by the fact that Chamberlain's observed suffering caused the surgeons to stop. They only continued when he insisted that they do so.

On hearing of the wound and assuming it to be fatal, Chamberlain's commanders recommended his promotion to Brigadier General. Grant, recalling Chamberlain's many prior acts of bravery, promoted him immediately. Eight stretcher bearers were dispatched to carry Chamberlain 16 miles to City Point, Virginia on the James River north of Petersburg. Here he boarded the hospital ship *Connecticut* and was transferred to the Naval Academy hospital in Annapolis, Maryland. He arrived with his boots and spurs on, "blood soaked and smeared, hair and beard matted with blood and dirt, pale as death and weak as water." General Gilmore, after visiting Chamberlain on July 5, described his condition in a letter reporting that "His wound is severe, the ball severed the urethra so near the bladder that by no artificial means can all the urine be voided (urinated) without some urine escaping and passing out through his wound. It is feared that ulcers will form in the abdomen and terminate his life"

Miraculously, Chamberlain began to recover. By the end of July, surgeons started to admit that the danger of death was passing and recovery was certain. The 2 favorite items that constituted his reading material during this recovery were the special order promoting him to Brigadier General and his obituary released by the army to the New York newspapers. Ironically he would ultimately die of this wound, but not until he was 85 years old. Although he did not die, Chamberlain did have to suffer with the insertion and keeping of an inflexible silver catheter in his urethra on multiple occasions for multiple days during his recuperation from surgeries. Such catheters would inevitably be necessary for past surgical urinary drainage.

The first known recorded reference to the use of a catheter was in a report sent by Doctor Vanderkief to surgeon J. H. Brinton on September 20, 1864. He noted that after only 5 days of use the catheter had become encrusted and concluded that if prolonged catheterization was necessary it should be changed frequently to avoid this complication. This "changing" unfortunately did not happen with Chamberlain whose catheter was apparently left in for multiple days without being changed. The result was an infection and the non-healing of the fistula (an opening ... in this case of the urethra) just in front of the scrotum.

<p>Silver Urinary Catheter</p> <p>This metal catheter is placed into the urinary bladder through the urethra when the patient is unable to pass urine, due to obstruction or traumatic damage to the urinary passages in the pelvis. The eyelets near the base can be used to fasten the catheter against accidental removal when it must remain in place for an extended period.</p>	 <p>to the urethra</p> <p>Illustrations and text from <u>Civil War Surgeon</u></p>
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Catheters in the late 1800s were cast of wood or metal. Accordingly, it is easy to imagine that an urethro-cutaneous fistula (a hole in the urethra) could develop from prolonged use. That Chamberlain's fistula (opening) formed from prolonged catheter use rather than a direct, bullet hit seems evident after examining the bullet path and postoperative records. During his lifetime, Chamberlain suffered greatly from this injury. He was plagued with incontinence (urinating in one's pants requiring a diaper), impotence, recurrent cystitis (bladder infection), epididymo-orchitis (infection and inflammation of the testicles and scrotum) and osteomyelitis (infection of muscle and bone), which in an era without antibiotics were especially prolonged and miserable.

Given Chamberlain's suffering, almost anyone else would probably have retired to their home, comfortable that they had served their country well and believing that now was the time to attend to themselves. But Chamberlain's

dedication to the Union cause brought him back to the battlefield again. Although able to walk only short distances and unable to mount his horse without assistance, he returned to the command of his brigade in November 1864. Interestingly enough not much had changed in the Virginia theater. Union forces were still concentrating on the siege of Petersburg.

Aboard his horse Chamberlain gallantly spurred his troops on again. His men, never realizing how uncomfortable he was, fought brilliantly and were involved in the very last action of the war. Although relatively generous in his surrender terms, Grant insisted on a formal surrender of the Confederate arms and colors before a representative of the Union army. He chose Chamberlain, a superb soldier and a man he rightly deemed of all great ability and character. Therefore, he handled the surrender with dignity and respect, with the 2 armies according each other the final salute of worthy opponents.

Chamberlain's wound ultimately required 4 subsequent surgeries. Little information is available regarding these procedures, but they could represent attempts at opening up the urethra from the growth excessive scar tissue within the urethra. This was the case for 3 of the procedures, including the first in February 1865, the second in 1866 and the fourth in 1893 in New York City. More information is available about the third repair performed in Boston in 1883. An article from *The Portland Transcript* dated April 25, 1883 details how, with Chamberlain under the influence of ether anesthesia, the fistula (opening in the urethra) was closed by what appears to have been some kind of flap coverage procedure. Despite the optimistic description of the technique, surgery failed and the fistula remained open.

Throughout the rest of his life Chamberlain suffered constant pain in both hips and the lower abdomen in addition to recurrent infection and inflammation of the testicles and scrotum. These episodes would often send him away from his duties for extended periods of recovery during which his discomfort was unimaginable. We have no direct evidence as to whether Chamberlain was impotent but it is hard to imagine maintaining potency after the urethral disruption and multiple surgical procedures.

As with most great men the story never seems to end. Chamberlain returned to teaching for a short period and even served as President of Bowdoin College for a time. He found himself drawn to politics and was urged by the Republican Party to run as candidate for Governor of Maine. Chamberlain won, serving 4 distinguished terms. In 1914 Chamberlain died at the age of 85. The cause of death listed on Chamberlain's death certificate is "a bacterial infection throughout his entire body probably caused originally by a urinary tract infection."

CONCLUSIONS Joshua Lawrence Chamberlain survived smallpox, heat stroke, malaria, typhoid and tuberculosis. His horse was shot from under him 5 times and 6 times he was hit with rebel lead causing his obituary to be sent to the New York papers on 2 occasions. The most devastating injury was the pelvic wound, the complications of which he endured for almost 50 years. Despite this medical history, he engaged in innumerable skirmishes and 24 battles, capturing 2,700 prisoners and 8 battle flags. He won the Congressional Medal of Honor for his effort at Gettysburg and was subsequently promoted to Major General. This former theology professor is not only among the most remarkable soldiers ever to serve, but also one of America's greatest heroes. His exploits under fire and later accomplishments despite his infirmities pay tribute to the men and women who fought to preserve and later expand the United States of America into the 20th century.