Reports of the peninsular campaign : surgical experience &c.; / by John Swinburne.

Contributors

Swinburne, John, 1820-1889.
National Library of Medicine (U.S.)

Publication/Creation

Albany, N.Y. : C. Van Benthuysen, 1863.

Persistent URL

https://wellcomecollection.org/works/rftbytps

License and attribution

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

REPORTS

ON THE

PENINSULAR CAMPAIGN,

SURGICAL EXPERIENCE, &c.

By JOHN SWINBURNE, M. D.,
OF ALBANY, N. Y.

ALBANY:
STEAM PRESS OF C. VAN BENTHUYSEN.
1863.

LXII

Reprint from Transactions of Medical Society of the State of New York, February, 1863.

REPORTS.

Section I.

STATE OF NEW YORK:

Executive Department,
Albany, *June* 12, 1862.

Sir: Doctor John Swinburne, of this city, proceeds to Washington to-day, by my request, with directions to place this letter in your hands.

I have become satisfied of the importance of having a medical gentleman of high professional standing in the immediate vicinity of the army of the Potomac to give general personal attention to the soldiers from this State. As a large portion of General McClellan's army is from this State, it seems proper that we should have one or more representatives there to alleviate, as far as possible, the sufferings of the sick and wounded. I well know how solicitous you have been about those whom the exigencies of the service throw upon the medical department, and how wise and generous your arrangements are for them. The whole country approves your course in this regard. But you may well know that our people, who are so willing to respond to the call of the Government, feel the deepest solicitude about our volunteers, and especially so in view of the impending battle.

I would therefore respectfully and earnestly request that Dr. Swinburne may be permitted to go to the army of the Potomac to co-operate with the Government, as medical superintendent of New York State troops.

Dr. Swinburne has already spent four weeks at White House, as a member of the corps of Volunteer Surgeons, returning day before yesterday, and for the past year has had general charge of the Military Hospital of this city. No surgeon in the State enjoys a more deserved reputation than he, and from his urbanity and uniform courtesy, I am sure that no misunderstanding can occur between the United States authorities and himself.

I am, with much respect, your ob't servant,

E. D. MORGAN, *Gov. of New York.*

Hon. E. M. STANTON, *Secretary of War, Washington City, D. C.*

Referred to the Surgeon General, with recommendation that some suitable arrangement may be made, agreeable to Dr. Swinburne, so as to secure his services. EDWIN M. STANTON,

June 14. *Secretary of War.*

(COPY.)

SURGEON GENERAL'S OFFICE,
WASHINGTON, *June* 14, 1862.

SIR: I have this day entered into a contract with Dr. Swinburne (the bearer) for Medical and Surgical services with the army of the Potomac.

He has a letter from Governor Morgan, addressed to the Secretary of War, upon which you will find an indorsement by the Secretary, which will explain to you the status that it is desired Dr. Swinburne should occupy.

You will, as far as the exigencies of the public service will allow, afford to Dr. S. the means to carry out the wishes of Governor Morgan and Secretary Stanton.

Very respectfully, your ob't servant,

(Signed) WILLIAM A. HAMMOND,
Surgeon General, U. S. A.

Surg. C. S. TRIPLER, U. S. A
Medical Director, Army of Potomac, before Richmond, Va.

STEAMER ELM CITY,
July 29, 1862.

To WM. A. HAMMOND,
Surgeon General U. S. A.

Sir—Your instructions to me of the 14th of June were handed to Dr. Tripler, medical director, army of the Potomac, on the 16th. On the same day I received Special Order, 182.

SEC. 9. Acting assistant surgeon John Swinburne will report to Surgeon J. J. Milhau, U. S. A. medical director 3d army corps, for special duty at Savage's Station. * * * * *

By Command,
MAJ. GEN. McCLELLAN.

Signed, J. WILLIAMS, *Ass't Adj't Gen'l.*
(Copy.)

REPORT TO SURGEON GENERAL HAMMOND.

I immediately complied, and ascertained that Dr. Milhau had received no instructions in regard to my duties.

Hearing nothing further of said special duty, on the morning of the 18th I called on Dr. Tripler, who informed me that I was to establish a general hospital for the sick and wounded at Savage's

Station, Va., of which I was to take charge. I was to make requisitions for all articles and material necessary for the construction and furnishing of such hospital. On the same evening, I sent in requisition for approval of 75 hospital tents, 1,500 stretchers, and other things in proportion.

Late in the afternoon of the 19th, the requisition was returned, duly approved. On the same evening, I visited the White House and superintended the filling of said requisition.

On the 21st instant, the requisition not arriving, I sent a special messenger to the White House, who returned on the same evening with 15 hospital tents and 20 stretchers.

On the 22d I made a requisition on Dr. Tripler for a detail of 100 men, and a team for transportation. The requisition was partially complied with. I received 30 men; many of whom did not make their appearance until the 25th. I received no team whatever.* With this limited force, we put the outhouses in as good order as possible, put up the tents, and converted our flies into 15 more; making accommodations for about 600 patients in all. On the 24th, Dr. Vollum, medical inspector, visited me, and promised to send me all the tents and accommodation he could. On the 26th, I received 150 old A tents, which were intended to be used for the roofs of temporary buildings for hospital purposes. Finding the number of sick increasing so rapidly, being sent from division hospitals, I was obliged to cut poles, and put up shelter with these A tents as best I could. Before night they were full, and many were left without shelter. On the same afternoon many wounded were brought in from the right wing of the army, fed and immediately transhipped to the White House, agreeably to orders. Those received during the night and the following days remained, with the exception of the few who were able to walk; these moved on to the James river with the army.

The following days, Friday, Saturday and the Sabbath, we received about 1,500 wounded. In my surgical labors, I was assisted by Doctors O. Munson, J. Underwood, C. H. Volhees, Edmeston, Clark, Page, Hogan, Newell, Dueling, W. A. Smith, J. S. Smith, Fox, Sutton,† Dougal, Perkins, Middleton and Nordmann. Subsequently Drs. Faulkner, Philips, Russell, Potter, Bromley, Phillips, Milnor,† Marsh and Schell, arrived from other hospitals with their

---

* Instead of 1,500 stretchers, I received 20; instead of 75 hospital tents, I received 15; instead of 100 men, I received 30. Instead of axes, shovels, I received none for days. Instead of 1 team, I received none. Same tables, &c. Also, insufficient buckets, basins sponges; and, in fact, almost everything else was deficient.

† Drs. Milnor and Sutton died at their post, while in the hands of the enemy.

patients and assisted me. Drs. Tripler, Greenleaf, Smith, McClellan and Milhau, assisted me very materially in the necessary surgery and the general management of the hospital during this great and important crisis.

Late Saturday afternoon I was informed by Dr. Tripler that it would be necessary for me to remain there, inasmuch as in the course of a few hours the enemy would have possession, and that I must provide myself with food for at least one week, that he would give me an *ad libitum* order on the commissary for stores to that end, which he did; that he would also give me a letter from Gen. McClellan to the commanding officer of the Confederate forces, explaining my position and his pleasure with regard to the wounded and sick, which you will find in Doc. 1.

In reference to the difficulty which now remained, to procure the transportation of food and hospital stores from the general commissary stores, I was unable that evening to obtain any detail, either of men or wagons, to make this transfer. Notwithstanding, I continued these efforts until 12 o'clock at night, and renewed them again at 4 o'clock in the morning. At 7, A. M., I had made but little progress. During Saturday evening, or early Sunday morning, I called on the proper authority, Gen. Williams, and begged that the general commissary stores should not be destroyed; or, that I should be supplied with sufficient quantity before such destruction should take place.

Early Sunday morning I was rudely upbraided by Assistant Adjutant-General McKeever, of Gen. Heintzelman's staff, for not having already supplied myself with proper hospital stores. I applied to Quartermaster Weeks, in accordance with special order No. 186, Doc. 2, who not only neglected to furnish the transportation, but he insulted me in the grossest manner, as he had on a previous occasion; the facts of which were simply these: After receiving my tents, and some other portions of my requisition, I found that portion which called for shovels, spades and axes had not been complied with, and that my detail of 30 men were waiting for them. In order to accomplish my labors, I borrowed a few from Quartermaster King which belonged to Quartermaster Wicks, but which King had mistaken for his own.

Quartermaster Wicks treated me very unkindly at this time, and compelled me to return the few that I had, and keep my detail waiting nearly two days before I could obtain any tools on requisition. Finding it necessary to have operating tables, of which my hospital was entirely destitute, notwithstanding the requisition for such, and finding that Quartermaster Wicks alone had tools neces-

ary to make them, I applied to him for them, and, after allowing my carpenter to make one table, he ordered them taken from him; and when spoken to in reference to this course, he answered: "The instruments are mine, and I have a right to do with them as I have a mind." And when told the use of the instruments was not a personal favor, but necessary for the wounded, he then ordered me out of his tent, hoping I would "never come back again," with many unpleasant expressions. I simply said I would return as often as my business called me there.

But to Captain McKelvey and the other members of Gen. H.'s staff, I am indebted for many attentions.

During the forenoon of Sunday, I succeeded in coaxing and hiring a few men to take up a small quantity of commissary stores. About noon the ever generous General Sumner appeared on the ground, who after hearing all the facts, sent a detail of one hundred men and supplied us pretty bountifully with food; still we had no sugar nor tea, which could have been procured by transportation at a distance of less than one-fourth mile, and was of course destroyed with the rest of the commissary stores. In this way the day was consumed. General Sumner also saved me fifty hospital tents, which would have otherwise been destroyed, and hence would have caused much suffering, inasmuch as there was then several hundred wounded lying on the ground without shelter, and these tents were required for that purpose.* The next morning the enemy took possession, carried off our nurse and labor detail, and caused otherwise much confusion, so that the doctors were converted into nurses, &c., instead of exercising their proper vocation. In this way their valuable time was consumed instead of attending to the necessary and proper surgical operations suitable at this period after injury. We were thus employed in performing duties which would otherwise have devolved upon cooks, nurses, hospital stewards, &c.

Sunday evening the forces of General Sumner were drawn up in battle array. Opposite to them and at right angles with the house-hospital, were the forces of the enemy. Obliquely from the hospital, and nearly on a line, was placed a Confederate battery, the first shell from which burst directly over the hospital, wounding one man slightly and frightening the others very much. The second shot burst just over the tents, killing one man by decapitation, and perforating the tent in many places. I then sent out a flag of truce with the following communication:

---

* There were in all 2,500 sick and wounded at this hospital. Their names will be found at the bureau of statistics in this State.

GEN'L HOSPITAL, SAVAGE'S STATION,
June 29, 1862.

To the Commanding General Confederate forces:

This is a hospital which contains 2,000 sick and wounded, some of them being your own—one, Col. Lamar of Georgia.

Very respectfully,

JOHN SWINBURNE, *Surgeon in Charge.*

He replied as follows:

The hospital will not be fired into unless undue advantage is taken of its flag. A. CONRAD, *A. A. Gen'l Confed. Forces.*

Soon after I received a peremptory order from Gen. Sumner "to come to his headquarters immediately," with which order I complied and received a gentle but decided reprimand, for presuming to send out a flag of truce without his order. Soon after a battle ensued from which we received about 35 wounded, many of them mortal.

On Monday and Tuesday we were eagaged in systematizing and making general arrangements for the comfort of the patients.

On Tuesday, Gen. "Stonewall" Jackson, C. S. A., sent a messenger to ascertain our wants and necessities—I returned with the messenger and had a conference with Dr. McGuire,* medical director Jackson's army; he informed me that we the surgeons were not prisoners of war—that we were free to go wherever we deemed our services requisite among the sick and wounded.

He gave me a pass to visit the various hospitals where our wounded were situated, and learning that many of our wounded were lying on the battle field of Monday, I returned on Wednesday with three ambulances loaded with food, and two surgeons, Dr. Edmeston of the 18th New York, and Dr. Underwood, volunteer surgeon, Massachusetts, leaving them at points where their services were most needed. I visited the battle field of Monday and found many of our wounded still on the field and still uncared for. I called on Dr. Mott, medical director of General D. H. Hills, C. S. A., who detailed Dr. Page, surgeon C. S. A., who with a corps of detailed men removed all he could find to suitable places, small houses in the neighborhood; these were attended principally by our own surgeons, of whom there was a very efficient corps.† On visiting the battle field of

---

*I believe it is to Dr. McGuire that we are indebted for establishing the precedent which exempts physicians from the ordinary usages of war.

† The names of Skilton, Robinson, McNiell, Donnelly, Kittinger, Osborne, Fossard, Collins, Cogswell, Underwood and my friend and fellow townsman, Edmeston, were among the number I now remember as efficient laborers.

Tuesday, I found the house and barn of Dr. —— contained several wounded who had no medical attendance or food. I called on Gen. McGruder, C. S. A., who after a hearing of the facts in the case, sent some of our own men to attend them, as well as rations. In conversation with him in reference to paroling our wounded, he also suggested that I should communicate the facts of our situation and necessities to Gen. Lee, commander-in-chief, C. S. A., with which request I complied, &c., of which the following is a copy:

GEN. MCGRUDER'S HEADQUARTERS,
CREW'S HOUSE, VA., *July* 3, 1862.

Gen. R. E. LEE:

Sir—I am left here by order of Gen. McClellan [a copy of the order had already been sent him] to look after the welfare of the sick and wounded, and since there are numbers of them placed in temporary hospitals extending from Gaines' house to the James river, a distance of about fifteen miles, and inasmuch as it is impossible for me to oversee and insure proper attention as to medication, nursing and food, I would therefore propose that some suitable arrangement be made either for concentrating them at Savage's and other stations, that these ends might be obtained, or what would be still more agreeable to the demands of humanity, namely, the unconditional parol of these sufferers.

From what I learn of your ideas of humanity, I feel assured, even if the Federal Government do not recognize the principle of mutual exchange, that this rule will not be extended to the unfortunate sick and wounded. The real prisoners of war should be treated as belligerents—while humanity shudders at the idea of putting the wounded on the same footing. Your surgeons have performed miracles in the way of kindness both to us as surgeons, as well as to the wounded. If this proposition does not meet with favor, I will with your permission, communicate with the Federal Government, that some basis of transfer may be arrived at. The majority, in fact all the medical directors of your army with whom I have conferred, fully agree with me as to the humanity of carrying out this proposition. My object in asking an immediate, unconditional parol is, that time should be saved, and that the sufferers should be released more speedily. Hoping to hear from you soon,

I remain respectfully yours, &c.,

J. SWINBURNE,
Surgeon in Charge.

To which Gen. Lee returned the following answer:

HEADQUARTERS, ARMY N. VA., }
July 4, 1862. }

Sir: I regret to learn the extreme suffering of the sick and wounded Federal prisoners that have fallen into our hands. I will do all that lies in my power to alleviate their sufferings. I will cause steps to be taken to give you every facility in concentrating them at Savage's Station. I am willing to release the sick and wounded on their parol not to bear arms against the Confederate States until regularly exchanged. But at present I have no means of carrying such an arrangement into effect. Certainly such a release will be a great relief to them. Those who are well and in attendance upon the hospitals, except those who were left for the purpose, could not be included in such an arrangement, but must be sent into the interior as prisoners of war until regularly exchanged.

Very respectfully your obd't servant,

R. E. LEE, *General.*

Dr. J. SWINBURNE, *Acting Surgeon in Charge.*

Being now nearly eleven o'clock at night I returned to Dr. ——'s house and stayed for the night. In the morning I visited the various farm houses about the battle field of Tuesday, and found that all the wounded had been removed to Malvern Hill, overlooking James river, where as I learned they were well cared for. While passing Gen. McGruder's headquarters, Dr. Guild, C. S. A., medical director, N. Va., handed me the following note:

MALVERN HILL, *July* 3, 1862.

There are several cases which are needing capital operations, and which are of the latest date. Shall they remain there to be operated on? If so, further aid will be needed to continue the preparations for the removal of the others, as our time will be fully occupied. Can we possibly have further aid? If Dr. Swinburne can come (I hear he is in the vicinity) I would like it, or some other Federal surgeon.

I judge by this time some of them at Savage's Station must be at leisure.

Respectfully submitted,

C. B. WHITE,
Asst. Surg., C. S. A.

To Maj. Gen. MCGRUDER, C. S. A.

In compliance with this request, I repaired to Pitt's house. I staid with Drs. White, Chamberlain and Jewett that day and part of the next, performing all the operations necessary at this period. Returning to the field of Monday, I was informed by some of the

Confederates that some of our wounded were in a dense forest, near by. Upon visiting the place, I found several in the position indicated, all of whom had been fed, and water given to, by the Confederate soldiers. I caused steps to be taken to have them removed immediately to a place where they could be cared for. I again visited the neighboring hospitals, found the surgeons of the U. S. A. were attending to their duty faithfully, and returned the same evening to Savage's Station, where I found my patients doing well; but my nurses--what few remained--pretty thoroughly worked out. In this connection I wish to make special mention of my *volunteer* corps of nurses; which consisted of Mr. Brunot, and several nurses (24) from Pittsburgh, Pa.; Rev. Mr. Reed, Washington, D. C.; and Mr. Howell of Chicago. These gentlemen assisted in the organization of the hospital, superintending the cooking and dispensing of food, as well as all those little things which belong to a hospital steward, and the general management of a hospital. Up to this time, and for some days afterwards, the Confederate authorities had neglected either to return the nurses that they took from us at the time we became prisoners, or send us others. This neglect on their part not only increased our labors, but rendered the wounded less comfortable, and in some instances proved fatal.

On or about the 8th July the Confederate authorities arrested the Rev. Mr. Reed, and, without making any specific charges, took him to Richmond. On the 9th I made a special requisition on Gen. Winder, provost marshal general of Richmond, in accordance with Gen. Hill's directions, for a detail of 200 of our men and rations for the same, to act as nurses, and for other purposes. About this time I visited Malvern Hill, and the hospitals in the neighborhood of White Oak Swamp, and found that most of the wounded had been removed either to Richmond or Savage's Station; and on my return to Savage's I found to my disgust and surprise that the Confederate authorities had arrested and carried to Richmond Mr. Brunot, his corps of nurses, and Mr. Howell, leaving us in a sad predicament in reference to our wounded. I again petitioned the officer in charge to the effect that he should visit Richmond in person, and solicit from Gen. Winder some of our men for nurses. On the 10th we received 200 men from Richmond, with whom no rations were sent. Up to this time we had not sufficient materials for food. But now our rations being nearly out, and the Confederate authorities furnishing none, I made a requisition on the officer of the post for food. On the 12th our requisition for food was answered by sending us a limited supply of flour and poor bacon. We were compelled to make the best of our condition; and with

these 200 men we commenced at once to improve the sanitary condition of the hospitals and grounds.

On the 12th we had everything in good order and our men comfortable. At this time Dr. Johnson, med. purveyor, C. S. A., visited the hospital. He said he supposed we had been or would soon be removed. On the evening of the 13th a courier arrived at the hospital with a message for Dr. Guild, which he read to me. It consisted in an agreement between Generals McClellan, Lee, and their medical advisers, Drs. Letterman and Guild, to the effect that we would be paroled and sent to our lines by the most direct route. For communication, made to Gen. Lee, see Doc. 3.

Dr. Greenleaf of the U. S. A., and Dr. Guild of the C. S. A., were to arrange the time and place at which this parol should be carried into effect. On the 14th the Confederate officers informed me that an entire exchange of prisoners would take place; that an agreement between the Confederate and Federal authorities was made; that Gen. Hill of the C. S. A., and Gen. Dix of the U. S. A., were to arrange the preliminaries. On the same evening, Maj. ——, C. S. A., met me with a train of army wagons, filled with sick from a hospital situate about a mile to the east of Savage's Station, en route to Richmond. He informed me that in the morning 300 army wagons would be at Savage's Station to remove our sick and wounded to City Point via Richmond, or to Richmond, and hence down the James river on flat boats to our transports. I protested against this inhuman manner of moving the sick and wounded. I took steps immediately to ascertain the truth of the statement, and procure a more humane mode of removal, as I then supposed, to our own lines. Since what had occurred on the previous two days, I had not the remotest idea that there would be any detention in Richmond; but, on the contrary, would be placed directly on board the flat boats and sent down the James river to our own transports.

Had I supposed that they were to be detained in Richmond to receive the treatment that they subsequently did, whereby many valuable lives were sacrificed, I should have sought an interview with Gen. Lee, and thereby have prevented this misfortune.

On the 15th Maj. Rodgers called with a train of cars, box and platform, saying we were to be removed to Richmond, thence down the James river on flat boats to our transports. This day he removed over a thousand, including physicians and many nurses. During the afternoon, Dr. Johnson, C. S. A., called, took charge of all stores, instruments, medicines, tents, &c., for which he gave me a receipt, see Doc. 4, saying the remainder would be removed the next day. On the morning of the 16th another load was removed,

and in the evening a second train had just been loaded. Many of the most severely wounded placed on platform cars, when we experienced the most violent storm of wind and rain, and which continued until late in the evening; the train arrived in Richmond about 10 P. M., it still raining somewhat. Dr. Churchill, U. S. A., in charge, informed me that no one was present to receive them; no building prepared to put them in; that no food was prepared for them; no persons present to unload the wounded. The train was left outside the depot, and that he, with the limited number of nurses, succeeded in removing those from the platform cars to the adjacent sheds and depot, by 3 o'clock next morning. Here these poor wounded men remained, in the rain, wet and cold, with no blankets, no food, and, I may say, no shelter; many of them lying near the rails for 40 hours. Dr. O. Munson, U. S. A., who had charge of one train, informed me that when good Samaritan women offered to supply the wounded with coffee, tea, or other nourishment, that they were rudely driven away by the bayonet of the Confederate soldier. Then under guard he was conducted to prison, where he remained without supper or breakfast, while for dinner he simply had a little poor bacon and bread. He remained in prison until two o'clock the next day, when he was allowed to visit his patients, under guard. He found that they had had no nourishment; no water to wet their wounds or to drink; and that their nurses had been taken from them. They remained in this condition until the afternoon of the 17th, when over a hundred of the worst cases were sent back to Savage's Station; the residue were sent to close and ill-ventilated hospitals, and several died before removal. Those who were returned to Savage's Station arrived late in the evening, and inasmuch as it was raining and they were in box cars, and the tents, what were left standing from the storm, were wet, I resolved to leave them where they were through the night. We therefore prepared them for supper—flour gruel, the only food we had—and then made them otherwise as comfortable as we could. The next morning we prepared tents and moved the patients to them. Being informed that we would stay some time at Savage's Station, and that those who were taken to Richmond were still there and would not be soon removed, we again made preparations for a long stay.

I had sent several surgeons to Richmond with the wounded, and learning from Dr. Munson, U. S. A., that about thirty U. S. surgeons were there in attendance, and were all kept in close confinement, and only allowed to see the patients under guard, and that every facility, including medicines, instruments, nurses,

proper food, &c., had been removed from them, and they were then upbraided for not doing their duty; and though we had sixteen left to attend, nearly half of whom were sick, on the 350 sick and wounded at this place, I deemed it best to retain them, inasmuch as they could do no additional good, since they would be treated as the others were. See Doc. 8.

Up to this time we had been enabled to furnish ourselves with some fresh meat and soups from some beeves which remained in charge of Rev. Dr. Marks, U. S. A., who had charge of a small fever hospital, of about 100 patients, situate about a mile east of Savage's Station, the management of which requires some little notice; and though I have not a statistical report, I think it was the best managed and disciplined hospital in Virginia. But now the remnant of our own stock, including instruments, medicines, &c., having been taken by the Confederate medical director, under the alleged impression that we were to have been removed at the time the rest were, we were obliged to depend upon the material furnished by requisition from Confederate authorities or by purchase with our own funds. Up to this time the officers had furnished the principal portion of their own subsistence by purchase. It then became a matter of serious consideration, knowing, as we did, that the rations furnished by the Confederates consisted of flour and poor bacon only. While food, necessary for the comforts of the sick, was very expensive and difficult to obtain, and the inhabitants were unwilling to sell unless for gold, and were also instructed from Richmond not to sell to the "Yankees;" so that it was very difficult to obtain a sufficient amount of food for the officers, and at the following exorbitant prices: Eggs, $1.50 a dozen; milk, 25c. to 50c. pr. quart; butter, $1.25 pr. lb.; sheep, $8 a piece: other things in proportion. While at Richmond, tea sold for $10 and $16 a lb.; coffee, 20c. pr. lb.; common brown sugar, $1.25; brown hard soap, 50c. for a piece 2 inches square. Other things proportionally high, including bread. I wrote to Dr. Guild, medical director, C. S. A., our condition and wants, who answered it by sending us, the next morning, Dr. Winfield, C. S. A., medical inspector hospital, camps, &c.; and accompanying him was Col. ——, an officer of Gen. Lee's staff, and sent by him. In answer to the inquiry of these gentlemen as to what we were feeding our patients, I stated that flour and bacon was their food, medicine, &c.; it was all we had; that our bacon, though limited in its supply, was absolutely maggoty. This statement was confirmed by Lieut. Lacey Stewart, C. S. A., commanding post. I referred him to the wan, worn, and exhausted countenances of the patients; that what little choice

stores we had were removed by their own people on the 15th inst. They left, saying they would see to it, and send us all they could; that they had been providing us with rations the same as was supplied to their own men; that they would also interest Gen. Lee in our behalf. In the evening, they sent us a small invoice of medical stores; the first and only supply from the C. S. A., for copy of which see Doc. 5. I will here state that nearly 100 of the patients, then at Savage's Station, had recently been brought from a hospital, situate on the battle field of Friday, June 27, where they had lived on nothing but flour from the day of the battle up to July 16, and hence were exhausted, and many moribund when they arrived.

This hospital was under the charge of the late Dr. Milnor, U. S. A.,* who fell a victim to cerebral exhaustion, induced by this insufficiency of food.

In reference to the removal of the wounded men to Richmond and their subsequent treatment, Dr. Winfield, C. S. A., stated that they should never have been removed until paroled, and then sent directly to our lines; that their removal was not in accordance with Gen. Lee's or the Medical Director's wishes, and intimated that it was brought about by some meddlesome parties in Richmond who wished to exercise a little brief authority. But I gravely suspected that it was more a desire to make an exhibition of the "wounded Yankees," as they familiarly called them, than it was a meddlesome interference. Still I cheerfully and fully exonerate Gen. Lee from any part or knowledge in this transaction.

I feel assured that all the deficiencies and difficulties which we experienced were not the fault of Gen. Lee or his medical staff, since all the generals and medical officers with whom we were brought in contact were unusually attentive to the necessities of the wounded and sick; but that there was a fault somewhere there is no question, and that fault I attribute to the inhumanity of the authorities at Richmond, and this fault has been a *fatal* one to *many* of our *wounded soldiers.*

In view of all the circumstances here set forth, on the 20th I summoned all the medical officers present to meet in order to devise some suitable means of sustaining and supporting the strength and thereby preserving the lives of the wounded remaining at Savage's Station. For result of those proceedings see Doc. 6. In the afternoon, I visited several farm houses in the neighborhood, found mutton and beef very expensive. From this time we made mutton

---

* Dr. Milnor was a volunteer contract surgeon, and was only temporarily employed.

soup in addition to the rations furnished, and which supply I kept up with my own funds.*

This day for the first, Lieut. Lacey Stewart, commanding post, succeeded in obtaining in addition to regular rations, some sugar, salt, and dried apples, the first and last they furnished.†

To-day, 22d, Dr. Sutton, U. S. A.,* died exhausted from typhoid remittent fever. See Doc. 7, letter to Dr. Guild.

On the 23d the surgeons passed preamble and resolutions, and attended the funeral in a body.

On the 24th I wrote to Gen. Winder a letter in relation to our status, which will be found in Doc. 8.

I also visited some of the battle fields and ascertained that none of our dead had been buried. They had remained as they had fallen; simply a sufficient dirt had been thrown over them to form a scanty covering, and in many instances hands and feet were still projecting, and many of the bones are now strewn about the field. This was true of all the battle fields from Gaines' Mills to James river. This, together with the unburied horses, made the atmosphere very offensive and sickening to those in hospitals. One fact is here worthy of notice: while the Confederates removed all their wounded, buried their dead men and horses in some secluded spot, they failed to bury our dead at all, and at best left them exposed for several days, a loathsome spectacle to behold, and from the fact of its occurring on every battle-field from Gaines' Mills to James river, one would be led to suppose that it was done purely for effect. We noticed another fact, that our wounded were always left on the battle-field, not only till theirs had been removed, but their dead men and horses removed also. As an instance: some of the wounded of Monday, battle of White Oak Swamp, were left on the battle-field until Saturday, for which I could not see any palliating circumstances, nor could the enemy render any valid excuse.

On the 25th one of our surgeons, Dr. Milnor,‡ U. S. A., died very suddenly from inanition, induced by insufficient food. Upon this occasion I again addressed Dr. Guild, C. S. A., in reference to our condition. See Doc. 9, and received in answer Doc. 10.

On the 26th the surgeons met, passed appropriate resolutions in reference to his death, and attended his funeral in a body. At the same time I addressed Gen. Winder, see Doc. 8, and I received the following verbal answer: "He had nothing to do with us."

---

* This money has since been refunded by Governor Morgan.

† I since learned that these things were drawn for his own command, and that he generously divided them with our wounded.

‡ Doctors Sutton and Milnor were volunteer surgeons, under temporary contracts.

On the 26th, Lieut. Lacey Stewart, commanding post, went to Richmond, and in the evening returned with a train of cars, saying we must be loaded by 4 o'clock A. M., the following morning, to be transhipped to City Point the same day. The following morning, according to directions, we moved to Richmond, under the kind care of Dr. Cullen, C. S. A., and were carefully transferred in good ambulances to the Petersburgh railroad depot, from thence to City Point, arriving at that place about 5 P. M., 27th, and were soon shipped on board our own transports. This being the last of our sick and wounded from the battle-fields before Richmond, except some few minor cases. The next day, 28th, I reported to Dr. Letterman in person, who said under the circumstances I had better report to you, the Surgeon General.

I herein append the names of the sick and wounded of those remaining at Savage's Station on Monday the 30th day of June, and those received at that time, and up to our departure, 27th July, also the names of those who died, as far as could be ascertained.

All of which is respectfully submitted.

JOHN SWINBURNE, *Surgeon in Charge.*

P. S.—The conduct of Lieut. Stewart, who commanded the post, was such that the medical and line officers deemed it worthy a series of resolutions, commendatory of his course, which were presented to him, accompanied by an appropriate speech by Dr. O. Munson, U. S. A., on the evening preceding our departure, who, in answer, stated that during his intercourse with us he had received nothing but the most satisfactory treatment; that he should look back to that interview with more pleasure than upon any other period of his life, and that when next we met we should meet as friends.

To Generals Lee, D. H. Hill, Jackson, McGruder, and their medical directors, Doctors Guild, McGuire, Mott, and medical purveyor Johnson, are we particularly indebted for many kind attentions, and I feel assured that these gentlemen saved us from many indignities, which would otherwise have been practiced upon us. J. S.

(*Doc. No.* 1.)

HEADQUARTERS ARMY POTOMAC,
June 23, 1862.

To the Commanding General of the Confederate forces, or the Commanding officers:

Dr. Swinburne, a volunteer surgeon, with a number of other surgeons, nurses and attendants, have been left in charge of the sick and wounded of this army who could not be removed,

Their humane occupation recommends itself under the laws of all nations to the kind consideration of the opposing forces.

It is requested that they may be free to return as soon as the discharge of their duties with the sick and wounded shall permit, and that the same consideration shown to the Confederate sick, wounded, and medical officers who have been captured by our forces, may be extended to them.

A large amount of clothing, bedding, medical stores, &c., have been left both at Savage's Station and Dr. Trent's house.

By command,

MAJ. GEN. McCLELLAN.

CHAS. S. TRIPLER, *Surg. and Med. Director, Army Potomac.*

(*Doc. No.* 2.)

HEADQUARTERS ARMY POTOMAC,
CAMP LINCOLN, VA., *June* 20, '62.

Special Order, No. 186:

12. Thirteen men of the 2d army corps, ten from the 4th army corps, and fourteen from the provisional army corps, will be detailed by the corps commanders to report to acting assistant surgeon John Swinburne, for duty at the hospital at Savage's Station.

13. On the requisition of acting assistant surgeon, John Swinburne, in charge of the hospital at Savage's Station, the subsistence department will issue such rations, and the quartermaster's department will furnish such transportation as may be required for that hospital.

By command,

Maj. Gen. McCLELLAN.

S. WILLIAMS, *Asst. Adjt. General.*

(*Doc. No.* 3.)

GEN'L HOSP'L, SAVAGE'S ST'N. VA.,
July 7th, 1862.

To Gen. LEE, C. S. A.:

Sir—Your kind favor of the 4th, which informed me of the parol of the sick and wounded, and volunteer nurses, was duly received, for which please accept my kind regards. I now write you some of the circumstances which prompt me to ask an immediate removal, and enclose a letter from Dr. Skilton, in charge of the Nelson and Gatewood house.

This is only a sample of the solicitations, verbal and otherwise, of the necessities of life that I am daily in receipt of, and which I am expected to furnish. I returned here yesterday and found every available place occupied during the day and night. About a

hundred more wounded were brought in during the night, filling us to overflowing. Quite a change has taken place since my visit to you, induced by the crowded state of the wards, decomposing blood and filth, the suppurating wounds, the exhalations from human deposits and other filth. The insufficiency of help to prevent this, have rendered the place so offensive as to be almost insufferable. Typhoid fever is making its appearance among us to an alarming degree. We can accommodate no more sick and wounded, since what are here are suffering so severely from the combined influences of malaria and putrefaction. Yesterday we had a number of deaths, and mostly from typhoid fever. Four of our physicians are on the sick list, leaving us but few effective workers for our two thousand sick and wounded.

Yesterday two of our most valuable civilian nurses were stricken down, one with diarrhœa, the other typoid fever. In fact all the physicians are ready to succumb at any moment. Yesterday a Virginian gentleman came in and said about thirty of our men were sick from fever at his house, and he wanted me to give an order for their immediate removal to our place. I said I would send them food as I could, but they could not be removed to our place, for the obvious reason we had no room, and I knew of no other place they could be removed to.

I ordered the captain of the ambulance train to transport no more to this place until further orders; but that he must concentrate the remaining portion at the Nelson and Gatewood house until I could communicate with you. Now in view of all these facts and circumstances, I do not know what I can better do than to wait the action of your authorities, which I hope for the sake of humanity, will be very speedy. I feel most fully assured that you will do all that you can; and I hope therefore that I shall be pardoned for the solicitude which I manifest, as in fact I know I shall be when you know the condition to which we are reduced. We at this time request fresh meats for soups, stimulants, bread; and in fact there is scarcely anything we don't require, except salt meat. I cannot ask a supply of all these. I only ask you to carry into effect the condition of the parol which you were kind enough to promise us on the 4th. If this is to be done, let it, in the name of Christianity, be effected without delay. Now for every 20 sick and wounded, I require a day and night nurse—equal to 400, besides cooks, water and wood carriers, stewards, and so forth; instead of which we have not more than 150, including some of the crippled. I write this, not in a complaining spirit, but simply to give you a full knowledge of our condition.

Now in view of the suffering of the sick and wounded, I would respectfully ask as a favor, in the name of the surgeons with whom I am associated, and into whose hands our wounded have fallen, that we communicate with our government directly at Washington, to the end that they shall ask of your authorities the parol of the sick and wounded, in accordance with the contents of your kind note of the 4th instant; and also that we be transmitted directly to our lines, under a flag of truce, to the most eligible point not inconsistent with the interest of your government, and that the sick and wounded be left at Savage's Station, and there cared for, pending this favor.

I am, respectfully yours,

JOHN SWINBURNE, *Surg. in Charge.*

(*Doc. No.* 4.)

SAVAGE'S STATION, VA., *July* 15*th.* 1862.

Received of Dr. John Swinburne all the medicines, hospital stores, tents, &c., including the U. S. property left at Savage's Station hospital, except such as were used for the comfort of the sick and wounded.

(Signed) JAS. T. JOHNSON,

Surg. C. S. A., Med. Pur. Dep. N. V.

(*Doc. No.* 5.)

Invoice of Medicines, &c., issued to Surg. John Swinburne, U. S. A., in charge of Savage's Station Hospital.

B.

SURG.: James T. Johnson, Med. Purveyor, C. S. A.

Camphora, 1 lb.; cerate simp., 1 lb.; emp. adhesive, 5 yds.; iodine, 1 oz.; oleum terebinth, 1 bottle; opii, ¼ lb.; tr. ferri chlor. ½ lb.; whiskey, 5 galls.; bandages (rolls,) 6 doz.; lint, 1 pound.

I certify that the articles have been issued as above, and that they were delivered to Dr. John Swinburne, at Savage's Station.

(Signed) JAMES T. JOHNSON,

Surg. and Med. Purveyor D. N. V.

HEADQUARTERS, D. N. Va., *July* 19*th*, 1862.

(*Doc. No.* 6.)

GEN. HOSPITAL, SAVAGE'S STATION, VA., *July* 20*th*, 1862.

A meeting of surgeons was held this day, for the purpose of appointing Dr. J. Swinburne to purchase *fresh meat* for the sick and wounded at this hospital; said sick and wounded, now suffering for

the want of these articles, being unprovided for by the Confederate authorities.

The meeting being called to order,

Dr. Churchill was elected president, and J. P. Middleton, secretary.

Drs. Schell, Nordman and Page were duly appointed to draw up resolutions, and offered the following:

Resolved, 1*st*, That the bacon and flour, the only food at present furnished us by the Confederate government, is totally inadequate as a diet for many, if not most, of the wounded men in our charge.

Resolved, 2*d*, That some strong soup, made from fresh meat, is absolutely necessary to save the lives of many of our patients; and that we hereby request Dr. Swinburne to purchase such sheep or beeves as he may deem best adapted to the case, and earnestly recommend to the U. S. government that the purchase money thereof be refunded.

On motion the resolutions were adopted.

(*Approved.*)

A. Churchill, Ch'm. and Surg. 14 N. Y. V; P. Middleton, Sec'y, A. A. U. S. A.; H. H. Page, Vol. Surg. U. S. A.; N. Milner, A. A. Surg. U. S. A.; A. Palmer, A. Surg. 2d Me.; O. Munson, A. Surg. N. Y. V.; E. J. Marsh, A. Surg. U. S. A.; H. I. Schell, A. Surg. U. S. A.; W. A. Smith, A. A. Surg. U. S. A.; A. P. Clark, A. Surg. 37 N. Y. V.; G. F. Perkins, A. A. Surg. 22 Mass. V.; Wm. Faulkner, Surg. 83 Pa. V.

On motion, the meeting adjourned.

(*Doc. No.* 7.)

GEN. HOSPITAL, SAVAGE'S STATION, VA., *July* 23*d*, 1862.

Dr. GUILD:

Sir—I regret, exceedingly, to again trouble you, but, under the circumstances, I must call your attention to a fact which I have before stated to you, that "some of our surgeons are sick." One of them breathed his last yesterday afternoon. Some others are still sick, and all are more or less unwell. Lieut. Johnson, the commandant of this place, is now very sick, as is also several of his men. Lieut. Lacey Stewart has recovered, and has gone to Richmond, to-day, to procure rations for the patients. I feel as if I could not resist, much longer, the combined influences of this pus-generating place, and the insufficiency of flour and bacon, as food. It is not, however, for myself that I am so anxious. I have, in my keeping, many valuable lives, and I feel that every exertion, on my part, is due to them, to the end that they may be spared to their families.

In view of these facts, I have purchased two sheep, daily, from my own funds, and have converted them into soup for the patients, hoping that it might contribute, somewhat, to their physical force during this trying ordeal. I trust, therefore, you will continue to exert your benign influence, in behalf of suffering nature, so long as our necessities remain in the present status, or until we can all be removed to our own homes. I have to thank you for many kind attentions which I can never repay, or which, at least, I never expect to repay in the same way. So also, Gen. Lee's attentions have surprised me, since he is burdened with a thousand cares incident to a life like his. I can only attribute it to his sympathy with those in distress, whether friend or foe. Now, sir, will it be possible for me, or some one of us, to go on with these sick surgeons, who are delicate, and place them on board our transports, and so superintend the removal of our sick and wounded? I hope you will excuse this constant interruption in affairs, since my whole heart is set on getting proper food for the sick and wounded. For myself it matters little, but please don't allow us to remain in Richmond over night.

I am, respectfully,

(Signed) J. SWINBURNE, *Surg. in Charge.*

(*Doc. No.* 8.)

GEN. HOSPITAL, SAVAGE'S STATION, VA.,
July 24th, 1862.

Gen. WINDER:

Sir—I address you, at this time, in behalf of the sick and wounded soldiers, now in confinement in your city and at this place. I had supposed, from assurances received from the medical directors and purveyors of the Confederate army, that we should not be retained, any time, within your lines, and hence we remained quiet, and have so continued, until forbearance ceases to be a virtue. When I send a surgeon to look after the interests of the sick and wounded, you place him in a lock-up, where he can do no good, and can only see patients under guard. Only two of these surgeons have returned, and their report is a sad one.

I send you a copy of my instructions from Gen. McClellan, and ask you

1st. If I can visit the places where the sick and wounded are imprisoned, and again return to this place without any obstructions or delay?

2d. Are we at liberty to return to our lines, in accordance with these instructions, of course under proper regulations which you shall specify and arrange?

3d. Can I send or take some of our surgeons, who are ill, to our transports, that they may recuperate? If they stay here they are sure to die. Yesterday we paid the last sad tribute to a departed surgeon of our army; others will soon go unless soon relieved.

4th. Can we have rations, suitable for the sick and wounded? I am sure you do not know the limited, and in some instances the absolute bad character of the food furnished for us all. Up to three days since, the only rations furnished us was flour and bacon. Yesterday we had rations sent, for three days, consisting of good flour, while the bacon and shoulders were absolutely filled with maggots.

Now if you judge this the kind of food furnished your sick and wounded prisoners North, or is in accordance with the usages of war among civilized nations, you are mistaken. I have had to buy fresh meat for soups, and bread, to supply the deficiency, since we have no means of cooking flour suitable to the sick. Now I submit that flour and poor bacon are entirely unfit for the sick and wounded, since many have died from sheer exhaustion or starvation, and many more will die unless better fed. Many of those taken to Richmond and detained so long in the depot, without proper attention, have also died. Now, sir, all I ask is, to have the sick and wounded, who have become the recipients of my care, receive the attentions due them, as prisoners of war, agreeably to the usages of civilized people, and that the surgeons, to whose care they are intrusted, be treated, *not as felons*, but in accordance with the precedents which have been established, and which you publish, in all your papers, as the laws of the land. If we cannot be fed, in accordance with the common usages of war, in other words, if you have not the material wherewith to feed us, so as to keep us from starvation, I feel assured that your elevated sense of humanity will assist us to reach our own lines, where we can be attended to. I have seen and attended your sick and wounded at New York, Philadelphia, Fort Monroe, and in this hospital, and have never seen any distinction made between them and our own. Now, with the insufficient nourishment supplied us, our funds failing, what are we to do? I leave the answer to your impulses of humanity, and ask you, in the name of the common obligations due from man to man, that you interpose your dictums and change the status of our condition.

I am, respectfully, &c.,

JOHN SWINBURNE,

Surgeon in Charge.

(*Doc. No.* 9.)

July 26th, 1862.

S. GUILD, M. D., *Surg. and Med. Director, D. N. V.:*

Sir—Since penning the preceding note, that your people neglected to send to you, I have to announce the death of Dr. Millnor, whose demise was very sudden. He was one of our most respected brothers, and died with his armor on, and evidently from sheer starvation or exhaustion. I am down with a form of diarrhœa, somewhat like cholera, stools being soapy and watery, and exhausts me exceedingly and keeps me confined to the bed. I have, by the concurrence of all the surgeons present, purchased daily, fresh meat, which has been made into soup for the sick and wounded, while we surgeons have eaten bacon and shoulder, the majority of which is absolutely bad, being maggoty. Now, my dear doctor, in the name of common professional friendship, do interpose in our behalf that we may leave this place. After the 2,000 sick and wounded left for Richmond, we had 16 surgeons, two of whom have died from inanition, and several more will follow unless very soon relieved. I am certain that my strength cannot hold out long; others are complaining from nervous exhaustion. We have no soap, no candles, or anything else, except flour and poor bacon. If we go to Richmond we are thrown into prison, as the rest of the surgeons have been. What is our remedy? In this dilemma, we appeal to you, since no official, outside of our profession, unless it is General Lee, would take any interest in our affairs—do come and see us that you may act intelligently, and from your own observations. I don't want to die here, and I know the other surgeons don't, and besides, you assured me that we were not to be prisoners, but would be allowed to leave by application to the proper authorities, when our services ceased to be useful to the sick and wounded; and this status I claim now exists for the majority of us, and has so existed for some days, and particularly for the sick surgeons, since four of the well are amply sufficient for the labor, taking into consideration the facilities with which we are surrounded.

An early answer is solicited.

I have the honor to be,

Very respectfully your obd't serv't,

JOHN SWINBURNE,

Surgeon in Charge.

P. S.—Will your have the kindness to submit these documents to General Lee, and oblige J. S.

(*Doc. No.* 10.)

CAMP NEAR GEN. LEE'S HEADQUARTERS,
July 25th, 1862.

Sir—Your communication relative to the suffering condition of the Federal sick and wounded at Savage's Station, has just been received. I will at the earliest possible time submit what you have written to me to the General, and suggest that you and your sick and wounded be conveyed, without delay, to your own lines.

The purchase of fresh meat being indispensably necessary for the use of your hospital, is approved by me as far as my official position is concerned, and I have no doubt the General himself will approve it.

I trust there will be no difficulty in your proceeding directly to City Point without hindrance or molestation, as you anticipate in your letters. I will ask the authorities to provide against such interruption in Richmond.

Very respectfully your obd't servant,

L. GUILD, *Surg. and Med. Director, D. N. V.*

To Dr. JOHN SWINBURNE, *Surgeon in charge of Federal Hospital, Savage's Station.*

(*Doc. No.* 11.)

SURGEON GENERAL'S OFFICE,
WASHINGTON CITY, *Aug. 18th*, 1862.

Sir—Your communication of the 7th inst. has been received. The Surgeon General accepts your resignation, and in doing so he desires me to tender you his sincere thanks, for the very faithful and able manner in which you have performed the duties to which you have been assigned. * * * * *

Very respectfully your obd't servant,

By order C. H. ALDEN, *Assistant Surgeon, U. S. A.*

Dr. JOHN SWINBURNE, Albany, N. Y.

OFFICIAL COMPLIMENT TO DR. SWINBURNE.

STATE OF NEW YORK:

SURGEON GENERAL'S OFFICE,
ALBANY, *August*, 5, 1862.

Sir—I am requested by his Excellency, Gov. Morgan, to express his high appreciation of the services rendered by you while serving with the army of the Potomac, as medical superintendent of the forces from this State, and acting assistant surgeon of the United States army, and to return you thanks for the same.

An expression thus officially made is not intended as invidious to the noble corps of volunteer surgeons, who so promptly and

faithfully gave their time, their energies, their professional abilities, and in some instances their *life*, to ameliorate the sufferings of the wounded; but that the position in which you were placed by the authorities of the State, the peculiar circumstances which resulted therefrom, and the manner in which you conducted yourself, both professionally and as the representative, for the time, of your Government, call for, as it is most cheerfully bestowed, the commendation and approval, not only of the constituted authorities, but of a whole community, who have watched, with vivid interest, the responsibilities, privations and labors to which you were subjected.

As the head of the State Medical Bureau, I cannot forego the opportunity of thanking you for the bright example your labors have furnished of conservative surgery upon the field of battle.

Had you, merely, in the performance of your labors, done all which humanity demands, you would have merited the compliment proffered; but to that you have added the exercise of high professional skill. When in a hospital of two thousand sick and wounded, you amputated less than a half dozen limbs, but strove rather to save, by exsection, you illustrated and carried out the views of the most intelligent of the profession.

Wishing you, in your safe return to your family and friends, the enjoyment of a well-merited confidence, I am, with respect, your obedient servant,

(Signed) S. OAKLEY VANDERPOEL,

JOHN SWINBURNE, M. D. *Surgeon General.*

SECTION II.

The following is the communication addressed to Secretary Stanton by Governor Morgan, asking him to allow me "to go to the army of the Potomac as medical director of New York State troops," together with the reply of the Secretary of War. Following which will be found the report and suggestion as made to Governor Morgan.

STATE OF NEW YORK:

EXECUTIVE DEPARTMENT,
ALBANY, *December 15th*, 1862.

To Hon. E. M. STANTON, *Secretary of War:*

Sir—On the 12th of June, 1862, I had the honor of addressing you a letter appointing Dr. John Swinburne, of this city, "to go to the army of the Potomac to co-operate with the General Government as medical director of New York State troops," which was indorsed

by yourself and the Surgeon General of the army, under date of the 14th of June, as will be seen by the accompanying pamphlet, which contains copies of the communication and indorsements.

The successful manner in which Dr. Swinburne surmounted all the difficulties and embarassments encountered at Savage's Station, and the wisdom everywhere displayed by him in the performance of the onerous duties which his position imposed before and after falling into the hands of the rebels, is well known to you.

He has again volunteered to leave for a time his large practice to go to the field near Fredericksburg in the same capacity, to do whatever may be in his power for the care of the sick and wounded in the recent battles.

He will be accompanied by Dr. William H. Bailey, also of this city, a gentleman of high professional and social standing.

They will present to you this letter. Permit me to specially bespeak for them your kind co-operation and aid, to enable them to reach their destination with the least possible delay.

I am with regard,

Your ob't servant,

E. D. MORGAN.

WAR DEPARTMENT,
WASHINGTON CITY, D. C., *December* 16, 1862.

Dr. John Swinburne, special agent appointed by the Governor of New York, has permission, subject to the approval of the Commanding General, to visit the army at Fredericksburg to aid in the care of the sick and wounded.

By order of the Secretary of War.

CHAUNCEY McKEEVER,

Asst. Adj't General.

FALMOUTH, VA., *Dec.* 21.

To His Excellency E. D. MORGAN, *Governor of the State of New York:*

Sir—In accordance with your instructions of the 15th inst., I reported to E. M. Stanton, Secretary of War, who approved of your course, and gave me a pass in accordance therewith, and also requested me to report to Dr. Letterman, medical director of the army of the Potomac.

With these instructions we complied, and found that the wounded were being cared for under the immediate supervision of Surgeon General William A. Hammond, U. S. A., and medical inspectors John M. Cuyler and Vollum, U. S. A. These gentlemen, by their efficiency and position in our government, were enabled to render the wounded as comfortable as possible within the shortest period,

and to remove them speedily from their temporary hospital accommodations to more pleasant ones at Washington, Alexandria, Point Lookout, etc. So promptly was this end attained that on the following Saturday after the battle, one week, there remained only about 800 in the hospitals, and these were so seriously injured as to render their removal hazardous. The fact also that all the army surgeons were at liberty to attend the wounded is in this connection significant, and serves to explain in some degree why the wounded received such prompt attention.

How different would the case have been had our army encountered a series of desperate engagements and been obliged to continue their march, as was the case in the seven days' battle before Richmond! In this case most of the surgeons, of necessity, would have been ordered on with their regiments; therefore the medical arrangements could not have been so complete or ample. In which case the suggestion hereinafter made might be pertinent.

I see in the papers, constant complaints about "bad surgery," "horrible butchery," etc.

This false impression is, in the main, I think, not founded on truth, and therefore the public mind should be disabused of this *mal impression*; since it is bad enough for the friends of the soldier to know that he is to be the target for *rebels in arms*, without feeling that if he escapes immediate death from the bullets of the enemy, he is destined to be sacrificed by the surgeon's knife.

Our general reporters cannot in all cases see the necessity for immediate amputation of a limb—of the resection of a joint where there seems but a small perforation of the soft parts, or of converting apparently small wounds into large and free incisions. Now, while our newspaper reporters cannot see all this as the surgeon does, he denounces it as "dire slaughter," or "horrible butchery." In the main, this is all wrong, since I can say with pride that the army is not only supplied with a great majority of good and intelligent medical men, while a sufficient number can be selected from among those who are amply competent to decide, first, upon the necessity of an operation; second, upon the kind of surgical interference; then to see that these operations are properly performed by a skillful hand. Though it is conceded by all that Surgeon General Hammond is as thoroughly intelligent, active, and efficient an officer as could be obtained; though Dr. Letterman, medical director of this grand army, is always active and alive to its interests; though such efficient, gentlemanly, and thoroughly intelligent medical inspectors as Cuyler and Vollum are ubiquitous: still there remains the necessity of possessing Argus eyes, to the end that the

"Augean stables" are cleaned, and limb and even life might not be sacrificed to a morbid desire manifested by some officious surgeon to exercise the *opprobrium medicale*—*i. e.*, amputation.

It may seem presumptuous in me to offer any suggestions to men of such eminent ability as are to be found directing the medical department of our armies. I shall, however, offer to you, as the Executive of the Empire State, such suggestions as shall seem to me appropriate and just, in the present emergency, and particularly as you have seen fit to honor me as the accredited medical representative of the State of New York—to look to the interest of our troops now in the field. I should therefore prove recreant to my duty were I not to make all the suggestions which I deem pertinent to their welfare.

It might be urged that Doctor Letterman, medical director of the army of the Potomac, had so arranged the corps of surgeons that no abuses might possibly creep in, and still, in my judgment, there is something radically wrong in the manner in which surgeons are selected to fill certain positions. Merit or competency is, in many instances, entirely ignored, and seniority takes its place. Now, I contend that each surgeon has some specialty in which he excels; one may be a good executive officer, a second may be a good secretary, a third may be a good dresser, a fourth may be a skillful conservative surgeon, while a fifth may be selected for his capacity as a rapid, skillful and dexterous operator. I contend that by this division of labor, recognition and selection of talents peculiarly adapted to the particular arm of medical service which is to be performed, would not only facilitate but enable them to leave a record which would remain as a lasting monument to the combined skill of our profession, and which could be referred to with pride in all future ages.

As it is now, many of the more useful, intented, conservative, and handy operative surgeons are acting in a purely executive capacity, as superintendents of hospitals, directors of brigades, corps, and divisions, instead of which they should be employed in selecting and deciding upon the operation to be performed, if any is requisite, and, if need be, to perform the operation in a manner most likely to give the patient the best chances of recovery. I know full well that there is a prevalent idea that the army is a good school for learning surgery. Now while this is true in a certain sense, it is not so in another. If we are not as practically familiar, from the cadaver, with our anatomy as we are with our A, B, C's, when we come into the field, we will not return accomplished, handy or practical surgeons. Granted that almost any one can amputate

a limb, tie up the arteries, and dress the same, still it does not follow that such are competent to dive into the deep tissues of the body—search for and tie the trunk of a bleeding vessel between the wound and the heart; nor that his experience is such as to enable him to decide instanter upon the most feasible operation—whether to wait for further developments, to make free incisions, remove spiculæ and other foreign bodies, exsect a portion of bone-joint, or amputate; while in the army there are a larger proportion of the medical men who have had great experience and are thoroughly familiar with disease and its treatment, who also understand anatomy and surgery as taught in the books, but who have no practical knowledge of either, and hence are more especially fitted for other duties than operative surgery. Instance your own experience as to the especial qualifications of those surgeons now in the field with whom you are familiar, and you can form some idea of what I wish to impress upon your mind; and this even will appear of more importance when it is known that the State of New York has made as good if not the best selection of surgeons for its regiments of any State in the Union, Massachusetts and Pennsylvania not excepted. For this judicious and extraordinary selection we are indebted to Surgeon General Vandepoel, of whom the medical profession of this State can feel justly proud.

Now, by what I have said or shall say hereafter, I do not mean to reflect upon the medical and surgical capacity of the surgeons, as a body, in the army. On the contrary, I can truly say that no other army of the size of ours was ever officered with a combination of so much professional talents; but I do say that while we possess this great combination of talents it is in a great measure misapplied. Take, for instance, our own Frank H. Hamilton, who consented to leave an elegant home, lucrative practice, temporarily relinquished his position as teacher of surgery in Bellevue College Hospital, to go out with a regiment of volunteers. What was the result? He was soon misplaced by making him a medical director of a corps, and that too where he was mainly useful as an executive officer, and where his peculiar talents could not be made available at the time of a great battle, when his genius would have relieved and saved many a valuable life. This was very noticeable at the battle of Fair Oaks, where he was the medical director of Gen. Keyes' corps, and where his valuable time was comparatively thrown away in providing for the physical wants of the wounded. This duty should devolve upon some medical men—while surgeons like Hamilton should see that no operations are performed except such as are requisite, and even then they are not consigned to unskillful surgeons, and,

if needs be, to perform the more critical operations himself. This I claim as due to the soldier who hazards his life for our common country. I mention this simply as only one among the many instances in which talent is being constantly misplaced in this grand army, where there are thousands of the best men in the country, who command and obtain at home the best medical talent of the country. Now, if these officers and men are willing to offer their bodies as a sacrifice to assist in saving our country from *villainous treachery* and *rebellion*, I think they have a right to *demand of our government* the services of the most experienced surgeons in the country, at any cost. In this respect our government has displayed the most sordid penuriousness. Let us see what are the facts in the premises. All the other officers have their pay increased in proportion to their rank, while surgeons' pay remains the same, whatever may be their rank, labor, responsibility, or talents; hence the impossibility of obtaining the greatest talent in the country.

If we look at this matter in a monitory point of view, we would see that our government would be the gainer were it to act upon the matter in an enlightened and humane light. It is furnishing artificial limbs to the maimed at a cost of about fifty dollars each, besides the pensions of about two hundred dollars a year for them during life.

Now, if, by conservative surgery, we save a limb, and thereby the great physical disability which follows, the government is the gainer, if the man lives ten years only, $2,050.00. Hence, if one surgeon saves, during a great battle, ten limbs from mutilation, the government saves $20,500.00 on the above basis of ten years as the media of life, after the hardships of war are over. Humanity, however, demands that we should view this matter in another light. It is a notorious fact that the surgeons hold it as a rule that an "arm seldom or never should be amputated for a bullet wound," since the entire shaft of the humerus, either of the bone of the forearm—most of both bones of the forearm—most of the carpus, can be removed, and still a useful hand and arm may be secured, providing its periosteum is carefully preserved, whereby a new growth of bone can be partially or wholly secured. Statistics show that no more deaths follow resections than amputations, *pari passu*, while the other objections urged against this conservative form of surgery have not weight, and its non-performance is more attributable to the wrong man in the wrong place, who feels himself incompetent to carry out this form of surgery.

Even admitting that there is a greater mortality attending resec-

tion than amputation of the superior extremities, which I think is not true, still the advantage accruing from this conservative form of surgery is sufficiently obvious, and serves to counterbalance the extra risk.

It will be seen that the objection which has recently been advanced as militating against resections is not well taken, when it is known that some of them have been afterwards amputated by officious surgeons without sufficient cause—others have been resected during the stage of congestion, when almost any operation would necessarily have proved fatal from the condition of the soft parts. Others have resected the inferior extremities—an operation at best doubtful in military surgery. These operations, like amputations, in order to be successful, require to be performed as soon after a battle as practicable. It is for this reason I think the country has a right to demand that the best medical talent of the army should be disposed of in such a manner as to investigate the real cause of failures when the cumulative evidence is in favor of conservative rather than heroic surgery. Notwithstanding the order issued to the army surgeons in reference to the saving of upper extremities from amputation, and the special instructions to be found in all the new standard works on surgery, I will venture to say there were not twelve resections performed among all the wounded at Fredericksburg.

At least I heard of only two instances, while I saw amputations performed at the shoulder joints and at other joints through the arm, which could have been saved with comparatively no risk to life, or at least no more than would follow amputation. Had they been my arm and I have known as much of the profession as I now do, the State of New York could not have purchased them. I trust that your Excellency will look at this point and save our soldiers from such mutilation. It is bad enough to amputate a limb when stern necessity compels it, without making it the rule and not the exception. To obviate this and other necessities arising after great battles, I would respectfully suggest that our State authorities have their agents in the field, and they should be provided with all necessaries as to shelter, food, clothes, and sufficient stretchers, which are light and easy of transportation, to keep all the wounded from the cold, frozen, or wet ground, as the case may be, making large allowances for any and all emergencies which might arise. How much better this than depend upon the taking of a *Richmond* or a *Fredericksburg* for the preceding desideratum. Besides this executive medical agent, there should be associated with him gentlemen of pre-eminent surgical capacity, who are to be recognized by

the government as counsellors to the army surgeons, and no capital operation should be performed upon the wounded of their respective State without giving the case all the consideration due its character. It is a well known fact that every State has more or less surgeons of known skill, and these should be selected, irrespective of their political proclivities, and paid in proportion with the sacrifice they make in leaving their business. Our own State can furnish a number of surgeons who would not only be an honor to the service, but a great saving of human life and limb.

I venture to make this suggestion, since it is too well known that the best surgical talent is not generally selected to decide upon the merits of a case, or the most conservative course to be adopted in any given one. These selections are mostly the result of favoritism —not merit, and hence the result. Now, to cut short this species of bad practice an order was recently issued that every leg or arm amputated should be sent to Washington for inspection, with the name of the operator, the history of the case and the nature of the accident. I will venture to assert that not one in ten of these stumps will ever be sent to Washington for such a purpose; and if they are, it would be but a poor satisfaction to the unfortunate owner of said limb to know, when alas! too late—the verdict would be that "said limb should not have been amputated," or "conservative surgery would have saved the limb." The old story over again of "locking the stable door after the horse is stolen." There is a prevalent opinion that the old army medical officers are better surgeons and executive officers than the civilian surgeons. To this it may be objected that in times of peace we have an army of from 12,000 to 20,000 men, while little if any surgery occurs to make them adepts; nor do they as a general rule devote any special time to practical anatomy. Hence they are not as competent or as familiar with surgery as the *great civilian surgeons* of our country. Again, they are not in the habit of providing the material of life, &c., as are the civilians, since our government provides all the requisites for them and their commands, and hence they are proverbial for "red tape." Another point worthy of notice is the great difference between a *grand army* on the one hand, and a few regiments half filled on the other.

The former eat and destroy everything in their course, and require extraordinary forethought and care to supply the necessities which such an immense body of men create and still be ready for a great emergency, like a *mighty battle*, while the latter can always find and purchase sufficient subsistence for all extraordinary emergencies.

Then I say that the civilian surgeon generally commences as an executive officer—makes herculean efforts to obtain a livelihood—while he at the same time is striving to reach the topmost round of the ladder of surgical pre-eminence. Not so with the regular surgeon, who, as soon as admitted to the secret circle, loses all desire for advancement. He knows without much exertion that his salary goes on and he can live with but little effort. Again, he is stationed on some outpost, and perhaps in some barbarous country to say the least, his fine feelings are not materially improved, since the men of whom that army is composed are, strictly speaking, soldiers, and not over refined. How widely different is the army with which they have now to deal, which is made up mainly of the best blood of the country—privates as well as officers—virtually citizen soldiers. These are some of the main points to which I would respectfully call your attention. Of course there remains many minor ones which would be obviated by remedying the major ones. In other words, the old adage of removing the cause and the effect subsides.

First. An agent, which you now have in the field, who has full power to follow the army, and to act under the special guidance of the surgical corps who accompany him, taking with him hospital tents for a thousand wounded soldiers; also, four thousand stretchers, to be used instead of hay, which is always an imperfect protection against the wet, in case of rain, and is also less expensive. These stretchers are to be supplied with immovable India rubber blankets, in case they cannot be housed; material for soup; kettles, or apparatus for making the same; condensed milk and other readily made form of food, such as farina, corn starch, Boston crackers, sea biscuit, rusk, &c., besides stimulants.

Second. This agent should be accompanied by the best surgical men in the State, who shall see to those cases which require to be so placed as not to be moved much, and who can in this way take as good care of them as if they were at home on their own bed. By so placing them on the stretcher in a tent, they can be carried out of their tents during the day, and again returned at night, or be transported any distance without suffering much inconvenience. This want of stretchers has cost many a poor fellow his limb, and perhaps life, and their want has been felt too palpably at every battle and at every field hospital to require any special comment in this connection.

Of course all this to be in conjunction and harmony, and not in collision with the operations of the existing medical department. I trust our State would not hesitate about acting promptly in the

matter could they know and feel the alacrity with which our government, and especially our able and efficient Surgeon General, U. S. A., as well as the medical directors throughout the army, have received the assistance of agents and medical men whose services were properly and respectfully tendered. All of which is respectfully submitted.

JOHN SWINBURNE,
Medical Director N. Y. State Troops.

Section III.

Resection of Joints and Conservative Surgery.

I have here presented for your consideration, 1st. The report of my stewardship, as made to Dr. Wm. A. Hammond, Surgeon General, U. S. A., while on the Peninsula.

2d. The report and suggestions as made to his Excellency Ex-Gov. E. D. Morgan, of my services as "Medical Director of N. Y. State troops," in and about Falmouth, Va.

3d. I now propose to read to you my surgical report of experience, as gleaned while in service during the past season, having especial reference to Conservative Surgery.

The especial points to which I would particularly call your attention are, 1st. Resection of joints. 2d. Removal of the shattered fragments of shaft and sawing of the rough ends of the same. 3d. Amputation, when and where necessary in preference to resections or excisions. 4th. The relative mortality of the two operations as performed on the upper extremities. 5th. The cause of so much distrust as to the practicability of exsections in the field. 6th, and lastly, I will endeavor to show that these objections are equally applicable to amputations, partial or complete exsections, or any other severe operation, if not performed at the proper period.

Now, authors divide operations into primary and secondary. My experience induces me to make still another division, which is, primary, secondary and tertiary; the tertiary corresponding with the secondary operations of authors. It must be remembered, that the stage which I designate as secondary, is one of congestion and inflammation, where the capillaries, small arteries and veins become large reservoirs, and all the parts a mass of distended blood vessels possessed of imperfect vitality. If, in this condition, any operation is performed, reparation goes on slowly, if at all, perhaps mortification and extensive sloughing of all the parts take place, and death follows, either from pyæmia, gangrene, exhaustion or shock to the

sensitive nervous system. So fully impressed were the surgeons with whom I was associated of this result that we agreed that no operations should be performed in this stage, and it must be borne in mind, that in hot climates, and even in Virginia, on the Peninsula, was this true, this stage is reached very early, say from two to four days.

I wish to call your especial attention to the condition which I have designated as the second stage, as it will play an important part in the discussion of this interesting subject, since all the misapprehension which has arisen was from a non-observance of this stage.

Now, it is a well known fact, that the second stage of authors, or the third of this paper, is where all congestion and inflammation has disappeared, the vessels have returned nearly to their normal condition, where pus is being discharged freely and the parts are making a herculean effort to throw off the effete matter, and hence by either amputation or the removal of diseased bone by exsection or otherwise, we are merely adjuvants of nature by removing quickly all source of irritation. This would account for the better success attending any operation performed in this stage than if performed during the second, congestive stage.

Previous to my entering upon this campaign, I had carefully read all the authority which was accessible on the subject of exsection of joints. Prominent among these was the *Boylston Prize* essay, written by R. M. Hodges, M. D., of Boston, Mass. This essay, so complete and comprehensive, left little doubt on my mind as to the propriety of exsection in the upper extremities under almost all circumstances in preference to amputation. In fact, amputation seemed the exception and exsection the rule, since more deaths have occurred from the former than from the latter, as evidenced by extended statistical tables contained therein. Added to this was the fact, that Dr. Tripler, medical director of the army of the Potomac, had issued specific orders on this subject, prohibiting indiscriminate amputation. With these views of the responsibility resting upon me, I entered upon my duties with a clear conviction of not only the propriety of exsection, but its advantages for the preservation of limb and giving a better chance of life by several per cent. than where indiscriminate amputation was performed. And since it is also a notable fact, that excisions, in military practice, have recently been looked upon with distrust by some army surgeons, I will endeavor to set forth the reasons for this loss of confidence. It is for the elucidation of this point that I have

divided the subject of injuries into three instead of two stages, or primary and secondary of authors.

Then the reason for this loss of confidence is, 1st. The performance of the operation in this, my second or congestive stage.—This was true at Fortress Monroe, and at all the hospitals which were located at some distance from the battle field, while few were left until the third or suppurative stage. 2d. The untimely interference of some surgeons on the sanitary boats, who amputated limbs which had been exsected, on or near the field of battle. This, I am informed, was the case after the battle of *Fair Oaks*, and which may account for the fact of all (some fifteen) the exsections which I then performed at Savage's Station, I was unable to trace many beyond *Fortress Monroe.* 3d. Exsection of the shaft of the femur has been performed in several instances, an operation at best doubtful, particularly in military surgery; while as far as I can learn, all these cases were amputated en route for home, and of necessity in this second or congestive stage, which is an almost sure guarantee of fatal results. These amputations were performed, as was alleged to prevent tetanus, while if left to themselves they might have resulted favorably. With reference, however to exsections of the superior extremities, there are no circumstances which weigh against this operation that cannot with equal propriety, be argued against amputations. If the former operation is resorted to in the first stage, the mortality is less than from the latter; so, if either be performed in the second or congestive stage, the danger of gangrene is at best as great from the latter as the former. The same is true of either if performed in the third or suppurative stage.

As to the fourth objection, it is a well known fact that tetanus is a frequent concomitant of the simplest form of gunshot wounds, even where the bones are uninjured. Nor is it true that exsection predisposes the system any more to an attack of tetanus than does amputation, nor does the performance of either of them exempt the wounded man from this fearful disease. In other words, amputation is as often followed by tetanus as exsection. Out of the great number of cases in this malady which I have seen from traumatic causes, I have yet to see the first case occurring after exsection. I have made diligent inquiry and can obtain no knowledge of the origin of this unfortunate impression. In fact, I have not conversed with a surgeon who has seen a case of tetanus following primary exsection. Hence, it is, that I wish to impress the profession with the important fact that no operation should be performed in this second or congestive stage. In other words, if the surgeon

is unable to perform primary operations, he should wait until the third or suppurative stage, for obvious reasons.

On my return from the Peninsula, I wrote to Doctor Hodges, stating my obligations, and thanking him for his valuable paper on exsections. Also giving him a statement of how much good we were enabled to effect by taking advantage of his valuable statistics and statement of the number of joints resected. He promptly answered me, but discouraged further trials, taking his unfavorable data from the operations in hospitals in and around Fortress Monroe.

It must be remembered, that all of the operations performed at Fortress Monroe, were from injuries received at Williamsburgh, West Point, Fair Oaks, etc. Of course, some days elapsed before they arrived at those hospitals, and of necessity, their wounds were congested and inflamed, or in that condition described as the second or congestive stage. They were exhausted for want of food, drink, etc.,—had lain out in the wet without blankets and just as they fell during the engagement. In this condition they were transferred to crowded, pus-generating and illy-ventilated buildings, where every capital operation and almost every wound became foul. Pyæmia, gangrene, erysipelas, exhaustion followed, and death closed the scene. Stumps of amputated limbs, which were healthy when received into the hospitals, soon assumed some of the above detailed characters with the like results, and hence it is not fair to expect that exsection alone, of all other operations, should do well. Notwithstanding all this, I am credibly informed, that some of the exsections of the shoulder-joint performed by those handy surgeons, Reed B. Bontecou, and Le Roy McLean, did well, and have resulted in useful limbs.*

Inasmuch as this letter tended to discourage conservative surgery, I shall make no apology for quoting from it, as it may serve to elucidate some points in this paper.

---

* Dr. Husted, of N. Y., into whose hands came one of the cases of excision of the shoulder joint, performed by Dr. McLean, at Mill Creek Hospital, informs me that it resulted in a good and useful limb. All, or nearly all the surgeons present, except McLean and myself, were opposed to excision, and in favor of amputation at the shoulder joint.

Doctor Husted thinks that if this case had fallen into other hands it would have been amputated, and thus I suspect it is with other cases which are reported as resulting badly, but which result is really attributable to meddlesome interference, or ignorance on the part of the surgeon.

99

Boston, *August* 17*th*, 1862.

My Dear Sir—I received your polite note of the fourteenth. * * * * So far, at least, as excision of the knee, for disease, is concerned, you may have seen in the last October number of the British and Foreign Med. Chi. Review, that Mr. T. Holmes confirms my conclusions by the Hospital Statistics of London. * * * * The tract which I prepared for the Sanitary Commission was furnished reluctantly, and only after some importuning, for the very reason that I did not sympathize with the generality of surgeons in their estimate of excisions, or feel that in military practice they would equal the expectations which many entertained. My impressions are just now confirmed by Dr. A. Coolidge, of Boston, who has been stationed in different hospitals at Fortress Monroe for six months past, seeing cases throughout their entire treatment, and who tells me, within a week, that *not a single instance* of excision of any point which fell under his observation during that period—whether primary or secondary—recovered; all either died, or required amputation, which, at that time, was sure to be followed by a fatal result. Even those performed by Dr. Post, of N. Y., the cases being selected with great care and operated on with skill, did not succeed. Dr. C. G. Page, of this city, who for several months has been in charge of the Judiciary Square Hospital, in Washington, tells me that during his connection with it, not a single case of excision recovered,* whether performed there, or immediately after the injury. But a single case which came under my own care, before Yorktown, raised the question of excision. This was that of a man wounded in the elbow. I preferred to leave the result to nature. The case did well for ten days, as long as I saw it. I learned, subsequently, that excision was performed at Yorktown, after the evacuation, that amputation finally became necessary, and then the patient died of pyæmia.†

I have written you quite at length, because I venture to differ from you in the estimate of these operations; and in spite of anything I may have heretofore said, I believe you will yet be of my opinion, at least so far as army practice is concerned. This opinion is, that in the lower extremity the excision of joints is to be condemned *in toto;* and that in the upper extremity, whilst a certain number of cases recover, very few do so without having run the patient into great risk of his life. Secondary operations being the

* Dr. Page, above referred to, has since reported a case of excision of the scapular end of the humerus, with good results.

† This case affords additional proof of the homicidal policy of operating in the second, or congestive stage.

most successful, and that the majority of all excisions do not recover at all.

Accept my thanks for the pamphlets, and believe me very truly yours,

R. M. HODGES.

JOHN SWINBURNE, M. D.

Now, in this paper Dr. Hodges quotes from London hospital experience, which does not seem like military practice, since hospitals are over-crowded, and hence, unhealthy; Dr. Coolidge's experience at Fortress Monroe, which of course is subject to the objections before detailed; the same of Dr. Page's cases; and I will presume to say *the same with those performed by* Dr. Post.

The case quoted of the elbow, mentioned as occurring before Yorktown, is directly to the point, and serves to impress us with the folly of exsecting or amputating a limb in the second or congestive stage. So fully convinced was I of this homicidal folly, that I refrained from performing operations during this stage, and advised others to do the same.

Now, in opposition to the above statement, I will give my own personal experience as to this operation and its results, and then quote largely from authors as to the views they have entertained concerning this operation, and particularly when practiced upon the upper extremities. I conceive that my experience was had under very unfavorable circumstances, as will be seen by reference to my report to the Surgeon General U. S. A., when it is well known we had none of the comforts, to say nothing of the luxuries of life—no medical stores or dressings.

Some upon whom these operations were performed moved with the army to the James river, and of necessity were subject to all kinds of hardships, including insufficient food, water, etc., for several days. Many of them walked and rode alternately in army wagons or ambulances, with their arms simply supported in a sling, and still many of them recovered. One of them, Lieutenant Felix Angus,* of Duryea's Zouaves, has, since his recovery, raised a com-

---

* The following letter will give the reader a better impression of the results than anything I can say and will explain the results:

CAMP PARAPET, LA., March 3d, 1863.

Dear Doctor—I received your letter of the 16th ult., and hasten to reply. It is with extreme pleasure I give you all the information in my power, for I consider myself under a lasting debt of gratitude to you for the benefit you have done me, for you saved my arm if not my life.

I was wounded while making the charge at Gaines Mills, in the right shoulder by a minnie ball, and falling immediately, was carried to Savage's Station. Several surgeons

pany, Co. I, for the 165th N. Y. S. volunteers, Duryea's 2d regiment, of which he is now in command. For the history of the result of this case I am indebted to Julius A. Skilton, surgeon N. Y. S. Vols., who, by accident saw the captain in New York city in charge of his company. Lieut. Angus recognized the doctor as one of the active surgeons present at the operation, and who afterwards dressed the shoulder at White Oak Swamps, also, several others, at least six in all, en route for the James River. This case made quite an impression upon the doctor, since the poor fellow begged us not to amputate his shoulder, as he could never follow his profession as an artist nor again take command of his company, as this was his "sword arm."

Dr. S. now says: "I am sure it would have done you good to see the satisfaction with which he expresses his gratitude for the preservation of his limb, and the manner in which he handles his sword with it now." This case shows the triumphant success of the operation under the greatest difficulties.

Still another of these cases has fallen into the hands of Dr. Lewis A. Sayre, Professor in Bellevue College Hospital, who informs me that it will result in a useful arm. To this case I wish especially to call your attention, since in this instance I removed the entire shaft of the humerus, leaving the two articulating ends of the bone. Besides, he suffered a loss of about two inches of the musculo spiral nerve, which was torn away by the ball and subsequent trimmings of the torn ends.

---

insisted on an amputation, but I would not listen to it and would rather have died than have lost my arm.

As it was, you may remember you took out my right shoulder joint, and during the operation I felt no pain whatever.

Two days after, the enemy attacked Savage's Station, and, of course, I was compelled to move, and finding an ambulance pained me too much, I walked from Savage's Station to about 12 miles of Harrison's Landing, making a distance of about 20 miles, which it took me four days to walk.

After arriving there, I went by easy stages to Baltimore, where I was well taken care of by my friends and my own private doctor, and where I nearly breathed my last, as the journey was rather too much for me.

After a week's sojourn in Baltimore I began to improve rapidly, and four weeks later I was in New York, riding in the Central Park, and enjoying life as well as ever.

I had to wear my arm in a sling two months, and I cannot raise my whole arm; but am compelled to write solely by the use of my forearm; that part of my arm, however I can use just as well as formerly. I cannot, however, write for a very lengthy period, as my arm tires, and in damp weather it pains me a little, but I can ride horseback, and engage in my military duties almost as well as if I had never been wounded.

Yours very respectfully,

F. ANGUS,

Captain Company A, 165th Regiment N. Y. V., 2d Zouaves.

I hope to be able to ascertain the fate of the residue, of whom I lost sight in the same manner. Eight or nine remained at Savage's Station. One or two of these were amputated on the fifth or sixth day while I was at Malvern Hill, attending the wounded there.

Now, if this is a sample of the necessity which is claimed for amputation after exsection, God grant that no more poor fellows shall ever be subject to the same *necessity*, since it can be characterized as nothing but mal-practice of the grossest kind, since both died of pyæmia.

Three weeks after operation, five of the remainder were so well as to be able to walk to the depot and be conveyed to Richmond on platform cars, sitting up with their arms in a sling. Of the remaining two I will speak presently. One of the five returned from Richmond on the third day, almost famished and completely exhausted from privations of various kinds. I shall never forget his wan and famished-looking face, in which deep suffering could be plainly discerned as he again entered his old home.

Here was a young man of sedentary habits, suddenly injured so as to require a severe operation—the removal of the head and three inches of the shaft of the humerus—and still at the expiration of four weeks he has so far recovered the use of the arm as to be serviceable, and to give you a tolerable shake of the hand. At this time his wounds were nearly healed. Such is the history of Lieut. Wynkoop, of Rochester, N. Y.*

---

* The following letter was received from the Lieutenant, is written by the hand of the injured arm, and its execution is almost as good as steel plate engraving:

ROCHESTER, Jan. 25th, 1863.

Dr. JOHN SWINBURNE, Albany, N. Y.

Dear Sir—I received your favor of the 18th inst., yesterday. You wish a full description of my arm, &c. I will give you such a description as I can, but doubt whether you will call it a good one. First, Doctor, I must thank you again for saving my arm, and no money could make me feel as happy as this disabled arm does; thanks to your skill and kindness. The arm you operated upon was my right arm, and this *letter* is *written* with the *same*. After you left me, at Fortress Monroe, my arm improved rapidly, and in four weeks was not only entirely healed up, but I was able to walk without in any way supporting my arm. On October first, four months after I was shot, I received my discharge, and went home, and now I have been engaged as clerk and book-keeper in a banking house, in this city, for the last two months. The wound has never opened after it once healed up, and I have very little pain in my shoulder. I can use my hand as well as ever, and have as much strength it it, but above the elbow I have no power at all. I can, when my arm hangs down straight, move it away from the side about two inches. * * * * * * * * * I suppose, Doctor, that you have left the service of the United States. Hoping you are well and entirely recovered from the effects of your visit to Richmond, I remain respectfully, your obedient servant,

HENRY J. WYNKOOP, Rochester, N. Y.

* * * * * *

I have to call your attention to one more of my Savage Station cases of excision, which appears in the Philadelphia *Medical and Surgical Reporter*, Vol. IX., p. 112, and pronounced a success, resulting in a perfect limb. Here then I have ascertained that of the twenty-two excisions of the shoulder and elbow, performed by me at Savage's Station on the 26th, 27th and 28th of June, six have resulted in good limbs, two were amputated without cause, and which, if left to themselves, would have resulted well; some were taken to Richmond after three weeks, all of which promised to be entirely successful, though, with the treatment meted out to our wounded in that place, the probabilities are that they shared the fate of the majority of the amputations which were removed to those pest holes called "Tobacco Warehouses."

Some object to this operation because "it requres so much time." Now, I contend that if we are good dissectors, it requires very little more time to excise a joint than to amputate. As instances of the rapidity with which these operations can be performed, *I exsected four shoulder joints and ligatured the bleeding vessels in one hour.* I trust that this is as rapidly as any one can amputate at the shoulder joint.*

It must be borne in mind that the only medical or surgical treatment these patients received after the operation, was a cloth wet with cold water, applied over the wound, and changed often—the arm simply resting in a sling—this plan was adopted as a dernier resort, since we had neither the dressings nor the time to apply them. This constant cold water dressing was the universal application, and curious as it may seem, it was the only effectual preventive of maggots, as it kept off the flies and even destroyed the vermin after they had been deposited.

Any one familiar with the anatomy of the thigh can fully understand the philosophy of its condition. The fascia lata is a strong aponeurotic sheath for the limb, which changes its relative position with every movement of its muscles, so that if a ball passes through the limb when the muscles are tense, the relative position of the respective opening in the skin and fascia lata is changed when relaxation takes place, thus forming a valve; hence all the blood is retained until the soft tissues, including periosteum, is more or

---

*Then again in case the shaft alone is comminuted, it would certainly require less time for a skillful surgeon to remove the spiculæ and remove the rough ends than amputation, in which case less would die from the former than the latter; and then, too, recovery takes place with a useful limb.

less injured; the blood is subsequently decomposed and converted into a putrid mass, and which becomes rapidly absorbed and destroys life, unless discharged by free incisions.

Every surgeon is familiar with the fact, that when any collection of fluid takes place within the fascia lata, it goes on until the whole thigh is filled to its full extent of distension, amounting perhaps to several quarts. Now, in opening this, the incision must be made crucial, since if an opening is made lengthwise of the fibres of this fascia, even to a considerable extent, the tensor vaginæ femoris is spasmodically contracted and the orifice is closed; on the contrary, a crucial incision is enlarged by the contraction of this muscle. This is precisely what takes place in compound fractures of the thigh-bone, and hence it may require the same free incision to relieve the tension. Now, you often hear the query, "Why do compound gunshot fractures of the trochanters, neck and head of the thigh-bone, so often result successfully, when fracture of the shaft almost universally does badly?" The answer is, that the bony tissue is less dense, and hence it does not splinter so badly, and the injured bone is outside of this fascia, or at least, its aponeurotic portion, so that the whole thigh does not as readily fill with blood as it does in injuries of the shaft, and hence its periosteum and other soft tissue is not so extensively destroyed by the constriction caused by the infiltration of blood in the sheath of the tensor vaginæ femoris.

In compound fractures of the tibia and fibula, without too great a loss of substance, we have not the disadvantages peculiar to the thigh, of facia lata and deep position of bone, to contend with, and hence I think that most of those limbs can be saved from amputation, by placing the patient on a stretcher or proper bed, the injured parts to be kept in their places by the aid of sand-bags placed longitudinally to the long axis of the limb, and thus obviating constriction by free incisions. In this way, as many, or more, will survive and with useful limbs, as would from indiscriminate amputations. On the contrary, where there is extensive injury to the knee-joint, such as is caused by the passage of minnie balls, shattering the bone into fragments, amputation is a *sine qua non*. The passage of bullets simply through the bones of the foot does not necessitate amputation. Numberless instances can be found where extensive injury has been done to the bones of the foot, and still recovery has taken place, with useful limbs. Instance, Capt. Becker, of the 44th N. Y. S. Vols., who was wounded through the tarsus at the

battle of Gaines' Mills. This case was treated by free incisions, cold lotions, etc., and resulted in a good limb.

I have now a case in point, in which the whole charge of a large pistol, consisting of four buck shot, wad, etc., passed through the leg, destroying the malleolus internus, opening the joint to the extent that I could trace with my finger the entire tibio-tarsal articulation. Free incisions were made to relieve constrictions; the limb was saved, and the joint left in a perfect condition. Had this case fallen into the hands of one less conservative, amputation would have been the result. Now, if sufficient stretchers are furnished the army for all cases of severe injuries of the inferior extremity, many limbs could be saved which are now sacrificed.

I feel assured, gentlemen, that, could you see what I have seen of indifferent surgery, you would feel as I do about saving limb as well as life. I am fully convinced that fewer deaths occur from exsections of the upper extremities than from amputation of the same. We have a case illustrative of the necessity of a conservative course. One of our soldiers, at the second Bull Run battle, received a wound from a musket ball entering the elbow-joint at the articulation of the ulna and humerus; the index finger could be passed into its bony track, but the ball having passed through the bone, could not be found; considerable synovia, and finally suppuration followed, discharging detached fragments of bone. After four weeks had elapsed, I ordered passive motion, and now the wound is healed, the arm is as strong, and the motion as free as before the accident, notwithstanding the non-extraction of the ball, and the joint evidencing the loss of its cartilage. This adds one more stone to the monument of conservative surgery. His arm was not amputated, being reserved, as the surgeon said, "for some future day."

Two more cases in point may not be amiss, as they serve to further illustrate the advantages of conservative practice.

Lieut. Lynn, of the regular army, had his shoulder-joint shattered by the passage of a ball through the head of the humerus. By some accident, it was overlooked in the hurry of the moment. Some days after, my attention was called to it, and, inasmuch as little inflammation had supervened, we decided to give nature an opportunity of saving the limb. Four weeks after the accident, he was nearly well, and with every prospect of entire success. In this instance the surgeons wished to amputate.

The next is a case of great interest. A captain in the regular army was wounded by a ball passing through the knee-joint. We could not ascertain to a certainty that the same was injured, as the course of the ball was directly through the centre of the joint,

from side to side, so it is possible that only the cartilage was wounded. Dr. Rogers tied the femoral artery, so as to interrupt and break the current of blood to the injured parts. When I last saw him, thirty days after the injury, there had been little inflammation, and the prospects were good for entire recovery. I have since learned that he *has* entirely recovered, with a good limb.

To continue this subject a little further, I will have to resort to statistics. Three weeks after the seven days' battle before Richmond, we removed to that city 1,564 wounded men; of these 1,239 were wounded in the legs and arms, and only 325 in all other parts of the body. Of the 1,239 wounded in the legs and arms, 948 were wounded in the legs, leaving only 291 wounded in the arms. Now, this great difference between the number of wounds in the upper and lower extremities will be more noticeable when it is known that only 40 amputations of thighs remained, while there were 37 of the arm. Now, instead of 37 amputations of the arm, we should have only 11, *i. e.* if we take the number of wounded in the lower as compared with those of the upper extremities, other things being equal. I will, however, state that this disparity may be partly accounted for by the fact that many more died from amputations of the lower than the upper extremities. Still, this ought not to make the broad difference, since many who suffered amputations and excisions of the upper extremities moved on with the army. The reverse of this was true of cases where similar operations were performed on the lower extremities.

Another reason which may be assigned for the great disparity between the number of wounds in the lower, as compared with the upper extremity, is that those wounded in the upper moved off with the army, while those wounded in the lower could not. Then, again, those who suffered amputation of the arm might have been too much exhausted for transportation, hence this may account, in some measure, for the great number of amputations of the arm, as contrasted with the small remaining number wounded in these extremities. Now compare this with the statistics of the leg, and there seems some plausibility for the reasoning. We find that at Malvern Hill and White Oak Swamps, scarcely one case of wounds in the upper extremities was to be found, unless there was also some other wound which incapacitated them from moving on with the army to Harrison's Landing. The fact, however, is significant, that with only 291 wounded in the arms, thirty-seven had been amputated, and this, too, after the lapse of three weeks, and, of course, excluding the many deaths which would naturally occur from amputations of the extremities, shows that either there were

a great many serious injuries of the upper extremities, or that great injustice was done to those who were only slightly injured. This gives a data of at least from thirteen to twenty per cent. of amputations of the arm to 100 wounded, or one amputation to every eight wounded in the upper extremities.

I noticed as a fact, which of itself was significant, that *no* attempt was being made to *save* wounded arms where the bone was injured in the least; in fact, *every* limb had been sacrificed, without *one* effort being made to save it. Many of the amputations were through the fore-arm and wrist. Now, with only 291 gunshot wounds of the arm, not more than ten or twelve amputations should have been performed, and even this is too great a proportion. One other fact in this connection speaks volumes. Upon diligent inquiry, I could find few arms which had been amputated for anything but simple bullet wounds, and no hemorrhage at that; several had been amputated for bullet wounds through the hands and fore-arm, a procedure which is all wrong and is little else than butchery, as all, or nearly all these cases would do better if let alone than if amputated, as will be seen by reference to statistics.

In my own operations I have the satisfaction of stating to the world, that I only amputated two arms, and they were torn off by shells or solid cannon shot. To elucidate this point of conservative surgery, I quote from the most excellent work, Dr. Stephen Smith's Hand Book of Surgery, page 195, where, quoting from Chassaignac, he gives the following reasons for resection of the upper extremities:

"1st. Compound fracture of the superior extremity, with protrusion of the shaft through the wound of the soft parts, rupture of the capsule and destruction of the periosteum; or, 2d. Fractures of the head of the bone from gunshot wounds, necessitating the removal of splinters of bone; 3d. The lodgment of foreign bodies, balls or projectiles, in the head of the humerus, resulting in a comminution of the bone, rupture of the capsule and the final development of the inflammation, terminating in necrosis and caries; 4th. Compound dislocations, with projection of the head of the bone through the wound of the soft parts."

Then again, Prof. Gross says of excision of the elbow-joint, vol. 2, page 1048:

"Experience has proved that the danger of excision of the elbow-joint is in general very slight, when the operation is limited to the articular extremities of the bones; when the medullary canal of the humerus is exposed, there is always risk of diffuse suppuration and pyæmia, and the same is true, although not in so great a degree, of

the medullary canal of the radius and ulna; besides, the shorter the excised pieces are, the greater, other things being equal, will be the probability of a serviceable limb."

I could here add, that the same is true of amputations, where the medullary cavity is opened, and it is a well known fact, that in amputations many die from this cause. Again, vol. 2, page 1051, he says of exsections of the shoulder-joints:

"In the first two Schleswig-Holstein campaigns, resection of the ends of the fragments was practiced for the cure of gunshot lesions in nine cases, of which four died, while of the remaining five, several had very defective limbs. Subsequently, resection was abandoned, the surgeons limiting themselves for the most part to the immediate removal of the splinters, and of thirty-two cases thus treated, only five died, sixteen per cent., the others making excellent recoveries, with useful limbs, although in many the humerus had been terribly shattered by cartridge shot."

In that most complete and comprehensive work on the excisions of joints, by Richard M. Hodges, M. D., I find on page 26, the following statement, which seems so applicable here that I quote it verbatim. He says:

"Not to particularize the cases susceptible of treatment by excision, it may be briefly said that it is appropriate to all injuries of the shoulder-joint where amputation would otherwise be necessary, which are not accompanied by too great destruction of the soft parts, or damage to the great vessels and nerves, and when the bone is not too much comminuted or splintered in the shaft. M. Baudens, one of the best modern authorities on this subject, regards the indications for excisions as absolute; *excision* the rule and *amputation* the exception, in all injuries of the head of the bone by a ball, even when the fracture extends to the diaphysis and into the medullary cavity. 'In four cases,' he says, 'we were content to remove the head of the humerus, without minding the fissures which ran more or less down the shaft of the bone into the medullary cavity, and recovery took place, just as if these fissures had never existed.' In the Schleswig-Holstein campaign, so much as four to five inches of the shaft were removed with the head, and without detriment to the result. As gunshot wounds are of so variable a character, injuries to the coracoid and acromion processes, to the clavicle, and more rarely to the body and neck of the scapula, will sometimes be found complicating that of the humerus. * * * Larrey's case was remarkable for the extent to which bone, the head of humerus, humeral end of the clavicle,

and acromion process was removed, and for its recovery, with considerable use of the arm."

In reference to the fitness of excision, as compared to amputation, I quote from Chelius' Surgery, vol. 3, page 727, where he says:

"The difficulty of its performance, especially on large ginglymoid joints; the danger of violent inflammation and wasting suppuration; the tediousness of the cure, and particularly that after the removal of the joint ends of the bones of the lower extremities, in consequence of the shortening and stiffness of the limb which remains, it is only retained in a condition far worse than the use of an artificial limb after amputation, which is much less dangerous, according to the cases as yet published. Many of these objections have lost their importance and are contradicted by experience.

"It must, however, be admitted, that the removal of the ends of bones is more difficult than amputation or exarticulation; yet the danger during and after the operation is not greater than in amputation, and the symptoms are not usually severe; the cure, indeed, is more tedious, but accompanied with fewer inconveniences, (Syme Jaeger,) and with the preservation of the limb, the patient finds it generally in a very useful condition. As regards the removal of the joints of the upper extremities, these circumstances are, no doubt, of the greatest importance, and, to a certain extent, influence its preference to amputation, as the preservation of the arm, even with confined motion, is not to be compared with its artificial supply after amputation, and experience of the consequences of the removal of the joints of the upper limbs points to the most favorable results. This operation on the lower limbs cannot, however, be considered so advantageous; it is here manifestly more dangerous; the after treatment more tedious and difficult, and the result, as to the capability of using the preserved limb, in many instances incomplete; so that only under peculiarly favorable circumstances should the removal of the joint surfaces be here performed.

* * * * * * * * * * * *

"These statements are founded on the cases hitherto published. Of Jaeger's collection of fifty-three cases of excision at the shoulder, but two had an unfavorable result; of thirty-four at the elbow, only four, and in three at the wrist, all were successful."

And again, on page 728, he says:

"It is impossible not to be struck by the fact that the constitutional disturbances succeeding to the excision of even so large an articulation as the knee-joint, but no comparison in kind or in degree with that which experience has proved to be the invariable

attendant upon simple penetrating wounds of a joint, when union is not effected by the first intention."

In the Schleswig-Holstein campaign, of forty resections of the elbow-joint for compound fractures, only six were fatal, thirty-two resulted in useful limbs—fifteen per cent. In the same campaign, nineteen out of fifty-four amputations of the arm were fatal—thirty-five per cent. In the Crimean war, of the twenty-two exsections of the elbow performed, three ended fatally—fourteen per cent. While of 153 arm amputations, twenty-nine deaths occurred—twelve per cent.

Of thirty-three primary disarticulations of the elbow-joint, twenty-eight were fatal—eighty-five per cent. Twenty-four out of thirty-one secondary* were also fatal—eighty per cent. Prof. Gross, vol. 2, page 1051, in speaking of saving limbs without mutilation, makes the following remarks:

" * * Enough, however, is ascertained to satisfy me that it is incomparably more safe than amputation at the shoulder-joint, and that it ought to rank among the established operations of surgery. When properly executed, as it respects the selection of the cases and the mode of the procedure, I believe that it will rarely, if ever, be followed by any bad effects, while the patient in the great majority of instances, will have a very good use of his limb."

While as to results of resections, Prof. Gross speaks in the following language, vol. 2, page 1050 and 1053:

"Excision of the elbow-joint on account of gunshot injuries, has lately engaged much attention among military surgeons. Dr. Esmarch, whose work comprises the details of all the cases of this operation that occurred during the Schleswig-Holstein campaigns, states that of forty upon which it was performed, only six died; in one the forearm became gangrenous and had to be amputated, and in another the treatment was still progressing when last heard from. The remaining thirty-two cases all recovered perfectly, with a more or less useful limb. In the Crimean war there were thirty-two resections of the elbow-joint among the British surgeons, with five deaths, of which two occurred after secondary amputation.

"In the Russian army, during the same period, the operation was performed twenty times with fifteen recoveries. Thus, of the whole number, eighty-two,—sixteen died, or one in about five.

" * * The *time* at which resection is performed in *gunshot injuries* of the elbow-joint, exercises an important influence

* I suspect that the above thirty-one cases of excision were performed in the second or congestive stage of this paper, and not in the true second stage of authors.

upon recovery. Thus, of eleven cases in the Schleswig-Holstein campaigns, in which the bones were removed within the first twenty-four hours, only one proved fatal; whereas, of twenty cases operated upon when the parts were in a high state of inflammation, second stage of this paper, that is, from the second to the fourth day, four died. Of nine resections performed from the eighth to the thirty-seventh day, only one ended fatally. These facts are practically of the deepest interest, as showing the bad effects which may be expected from interference after the occurrence of severe inflammation with incipient suppuration."

Dr. George Williamson has reported sixteen cases of resection of the shoulder-joint for gunshot injury occurring in various parts of the world, of which three proved fatal. In the Schleswig-Holstein campaigns, the operation was performed nineteen times, with a loss of seven, most of the deaths having been caused by pyæmia. Of twenty-seven cases operated upon by the British surgeons in the Crimea, only two died; and of fourteen cases resected by Baudens, all except one got well.

These statistics afford thus a total of seventy-six cases of this operation, with a loss of thirteen, or a ratio in round numbers of one death to six recoveries, a little over sixteen per cent., while amputations of corresponding joints give a mortality of twenty-nine per cent. Here, as in other joints, resection for the relief of gunshot injuries is most successful when performed immediately after the accident.

Still further to illustrate the great mortality from amputation, I give the statistics as taken from the Crimean war, and which are to be found in Hodges' Prize Essay, pages 12 and 13.

"Amputation	at shoulder-joint	33.4
do	of arm	26.4
do	of forearm	5.0
do	of finger	0.9
do	at hip-joint	100.0
do	at thigh, upper third	87.0
do	at thigh, middle third	60.0
do	at thigh, lower third	55.6
do	at knee-joint	55.5
do	of legs	35.6
do	at ankle	16.6
do	at medio-tarsus	14.3

" * * Simply because the operation is less fatal, is not however, a sufficient reason for excision to replace amputation. Indeed, it will be found that in this respect there is actually but little difference between them.

"The real question at issue is, whether, all things considered, amputation can be averted—excision substituted for it, and the usefulness of the limb preserved in a sufficient degree to render the operation an improved method of surgical treatment, and into this question the consideration of mortality does not enter except so far as to give assurance that the preservation of the limb is not bought at such an additional sacrifice of life as to more than compensate for the advantages gained."

The same author, Dr. Hodges, page 28, has collected fifty-three cases of primary excisions of shoulder and elbow, from Larrey, Baudens, Guthrie and others, with a mortality of only sixteen, thirty per cent. On the following page we find compiled a table from some other surgeons, of thirty-four excisions of shoulder and elbow, with only six deaths, a little over seventeen per cent; now take the above as compound fractures from gunshot wounds of the arm and forearm, as taken from Prof. Gross' surgery, which were left to the recuperative powers of nature, as compared with primary and secondary resections of corresponding joints in the tables given above, and we have, I apprehend, data sufficient to establish the question of amputation on the one hand, with a mean data of twenty-nine per cent. of deaths and excisions on the other, with a mean ratio of twenty-five per cent., leaving still a margin of several per cent. in favor of conservative surgery.

In this connection I would note the statement that, "secondary exsections are more successful than primary." Upon this subject, Dr. Hodges, in his report (L.) to the Sanitary Commission, on "Excision of the joints for traumatic cause," page 8, says: "Statistics show that secondary excisions of the shoulder joint, are more successful than primary, in the proportion of seventeen to ten. This is explained by the fact that it is the less grave cases which are reserved for expectant treatment." He might have added, with propriety, that if the deaths be added, which occur during the inflammatory or "expectant" stage, to those immediately attributable to secondary excision, the ratio would then be reversed, leaving the balance, seven, in favor of primary excisions, to say nothing of the exemption from suffering following the suppurative stage. He expresses his views on the point in the following explicit language:

"A patient with a shattered head of the humerus may recover without an operation, but to say nothing of the greater safety, more rapid and better results follow excision, than the gradual exfoliation of fragments, the time required, and the condition left by these

slow processes which accompany the latter course are more unlikely to give a useful arm."

Though I fully agree with Doctor Hodges, in this statement, yet I think experience will not bear him out in the following, where he says: "As the operation can be performed with the same, if not more success, after the establishment of suppuration." Now, admitting that "a certain amount of delay is admissible in doubtful cases," it does not follow that the "operation can be performed with the same, if not more success, after the establishment of suppuration," since many die during the inflammatory stage, and before the secondary period arrives; others die after the secondary operation, making the mortality much greater than if primary excisions were performed in all cases indiscriminately. In proof of this, I quote from the same author's prize essay, where he says: "Of twenty-six patients in the ambulances of M. Baudens, eleven immediate excisions were performed with ten recoveries. From their injuries seeming less grave, fifteen were treated by expectation; of these, eight died of purulent infection, three underwent consecutive resection with success, four suffered a long train of ill consequences from fistulous openings."

This I gravely suspect would be an approximation to the general result, in this class of traumatic injury of the shoulder and elbow-joint. Notwithstanding none of these consecutive resections died, eight out of the fifteen died during the inflammatory stage, and still it must be remembered that these fifteen cases were reserved for conservative surgery, because less severely injured. Notwithstanding this fifty-three and a half per cent. die, while only nine per cent. die from the primary excisions performed on the more grave cases. Again, on page 30, quoting from Esmarck, he says: "That of six excisions of the head of the humerus performed within twenty-four hours of the injury, two died. Of the three during the inflammatory stage, or on the third or fourth day, two died; and of ten after suppuration was established, two died. Of eight cases suited for excision, and which were left to nature, five died, and the remaining three at the end of six months still seemed to need operative interference."

In the above table, those operated upon in the

1st stage, gave a percentage of	33⅓	deaths.
2d. Inflammatory stage	66⅔	do
3d. Suppurative or secondary stage	20	do

Those left to nature, excluding the three that seemed to require "operative interference," sixty-two and a half per cent. These are important data, while they fully illustrate the views I had formed

from reading and experience. Common sense teaches us that if the source of irritation is removed at once, the exhaustion which usually supervenes upon the presence of foreign bodies in the living tissues is thereby prevented, and the fact cannot be concealed, that the mortality which is the direct result of this exhaustion and pyæmia, is so great that it more than counterbalances the advantages claimed for secondary, as compared with primary operations.

The operations performed in the inflammatory stage give also a large percentage of deaths. Instance the passages just quoted where two out of three died. So also in those cases left to nature, where in one instance, eight out of fifteen, and in another five out of eight died. I notice in this connection also, two cases of excision of shoulder-joint performed during this inflammatory stage, by David P. Smith, M. D., brigade surgeon, one of which died of pyæmia, and the second made a rapid recovery. It was in this stage that most of the excisions were performed at Fortress Monroe, by brigade surgeon R. B. Bontecou and others.

This fact accounts for the alleged unfavorable results of these operations. I hope, at some future day, however, to see these cases and their results published.

A very able writer in the British and Foreign Medico Chirurgical Review, sums up his views of excision of the elbow-joint in the following decided and explicit language: and since it is not the excision which we have to fear, whether primary or secondary, but exhaustion, or pyæmia, I will make no apology for quoting his language in full.*

"This operation, on the shoulder-joint, is applicable to compound dislocations, to cases where a bullet may have lodged in the head of the bone, and to all wounds of the shoulder-joint complicated with crushing or fracture of one or both bones entering into the articulation, unless, of course, the severity of the injury, by division of the great vessels, or by extensive laceration of the soft parts, necessitates ex-articulation of the limb. Nor need the extension of the injury to the shaft of the humerus deter the surgeon from attempting the operation. During the Schleswig-Holstein war, in more than one case, as much as four or five inches in length were removed from the shaft of the bone, and that with the most complete success." * * *

"Among the larger articulations, there is none to which the operation of resection is so admirably adapted as to the elbow. Compared with other joints, our more extended experience of the safety

---

* Braithwaite's Retrospect, vol. 36, page 130.

of this operation, its general freedom from a protracted convalescence, and the brilliancy of its results, justify our performing it on the elbow as a cure for disease, or as a substitute for amputation in cases of injury, with but little apprehension of danger to the patient's life, or little doubt of obtaining a successful issue. 'In short,' says Mr. Butcher, 'those trembling and sceptical about the propriety of the more severe excisions of the hip, knee and wrist-joints, yield their allegiance and assent tacitly in favor of excision at the elbow, and allow unsullied its accredited merits.'

"The elbow-joint, in cases of injury, may be resected in part or entirely, for gunshot or other compound fractures affecting it, where the injury to the bone is too extensive to permit of extraction ot the fragments, and where no extensive destruction of the soft parts or lesion of the great vessels necessitates amputation. It is also applicable to those cases where bullets have lodged in either of the articular extremities entering into the joint; and no less to cases of compound dislocation, where the most favorable result of the expective plan of treatment will but restore a stiff joint to the patient." And again, page 149: "Excision of the elbow-joint can scarcely be considered a dangerous operation, unless undertaken in the unhealthy wards of a hospital. Out of nineteen cases in my own practice, only two died from the effects of the operation."

In this connection I cannot refrain from quoting the language of Prof. Jas. Syme, whose opinion is worthy of much consideration, and inasmuch as his language is so perfectly apropos to the present emergency, I make no apology for its insertion, since many a surgeon in this war can, like Syme, feel "remorse of conscience on looking at the empty sleeves" of his unwitting victim. It is to be hoped that with Syme they also have "the satisfaction of reflecting that these are the last cases in which they will be guilty" of any unnecessary mutilation as amputation. In reference to this point, he says:

"In 1827, I had under my care a young gentleman of tender years, with disease of the elbow-joint, which had resisted all treatment. I wished to excise the articulation, but not finding any one in Edinburgh to sanction so unprecedented a proceeding, I reluctantly performed amputation. I have not seen him again till last year, when a tall, fine-looking man entered my room and introduced himself as the subject of this case. I confess I felt some remorse of conscience on looking at his empty sleeve, but I had the satisfaction of reflecting that this was the *last case* in which I was guilty of any such *unnecessary mutilation.*"*

---

* Braithwaite's Retrospect, vol. 31, page 106.

In this connection, I will quote from Sanitary Commission Report F., "on the subject of amputation," as stating the condition in traumatic injuries which renders amputation imperative, following which I will give my views of the same, in detail, from each section, and give a summary of the cases which are suitable for exsection, and should be treated in a still more conservative manner.

Necessity of Amputation.

"1. Cases where a limb is nearly, or completely carried away, leaving a ragged stump, with laceration of the soft parts, and projection of the bone.

2. Cases in which the soft parts of a limb are extensively lacerated or contused, the principal arterial and nervous trunks destroyed, and the bone denuded or fractured.

3. Cases in which a similar condition exists, without either fracture or denudation of the bone.

4. Cases of compound and comminuted fracture, particularly those involving joints. This rule is applicable only to the knee and ankle-joints.

5. Gunshot wounds in which the ball does not actually penetrate the joint, but in which the bone being struck above or below, the fracture extends into the joint. This rule is very objectionable, and may do irreparable mischief.

6. Gunshot wounds between the phalanges of the fingers or toes, do not necessitate amputation.

7. Gunshot wounds penetrating the wrist, unless great laceration has occurred, do not necessarily demand amputation.

8. In gunshot injuries of the shoulder and elbow-joints, provided the main blood-vessels and nerves are not injured, excision may, and should be, practiced with a fair prospect of success.

9. Compound fractures of the middle and lower part of the thigh, occasioned by gunshot, require amputation.* As regards similar injuries in the upper two-thirds of the thigh, the mortality following amputations has been so very great that army surgeons have generally abandoned the operation.

Dr. McLeod, after a careful inquiry into this point, says: 'Under circumstances of war, similar to those which occurred in the East, we ought to try to save compound comminuted fractures of the thigh, when situated in the upper third; but immediate amputation should be had recourse to in the case of a like accident occurring in the middle and lower third.'

---

* See note on page 188, for the views and results of Dr. Van Steinburgh's twenty-one cases.

Such cases must be left to the judgment of the surgeon.

10. Gunshot wounds of the knee-joint demand amputation. The operation of excision, in the very few cases in which it has been practiced by army surgeons, has not been attended by favorable results. This want of success is not, however, to condemn, except upon the field of battle, an operation which has been so successfully performed in cases of disease.

11. Gunshot fractures in the middle of the leg do not necessitate amputation, unless the arteries are destroyed, or the injuries involve the neighboring joints.

12. Gunshot injuries of the ankle do not necessarily require amputation. If the posterior tibial artery and nerve have escaped injury, and if the bones be not too extensively comminuted, attempts may be made to save the limb.

13. Great care should be exercised before proceeding to amputation, to ascertain whether a patient may not be otherwise mortally wounded."

Now as to sections one, two and three, there can be no exception taken, while to section four, cases of compound and comminuted fracture, particularly those involving the joints, I make the following objection: 1st. Those "compound and comminuted fractures" of the head, neck, and upper third of the thigh, "we ought to try to save the limb." (See No. 9. Doctor McLeod's opinion.) So say most of the best authors—in other words. The only cases of compound and comminuted fractures of the thigh "which are at all doubtful as to what ought to be done, are those involving the middle and lower third of the thigh, and perhaps an occasional exception in the leg." While almost the only cases of fracture "involving joints," which imperatively demand amputation, are those of compound and comminuted "gunshot wounds, of the knee and perhaps ankle joint," though section ten says, "gunshot injuries of the ankle do not necessarily require amputation;" with which opinion I fully coincide. Section five solves itself into a question of excision of the joint, free incisions and wait for developments, or amputate. Of course the latter of necessity would be confined almost entirely to the injuries of the knee and ankle. Sections six, seven, eight and nine, require no comment, while section ten, which states that "gunshot wounds of the knee-joint demand amputation," is so broad a limit, that great injustice may be done to the wounded by inexperienced surgeons. If the bones of the joint are not injured by the passage of the balls, and there is no escape of synovia, the question then becomes one of grave import to the surgeon as well as patient, and would solve itself into irri-

gation with cold water, proper support of the limb, and to wait for further developments. Sections ten, eleven, twelve and thirteen, are excellent, as is the whole paper, with the exception that they tell us what should be amputated without being specific, and also of leaving too great a latitude for inexperienced surgeons; neither have they given any directions as to the treatment of that class of numerous injuries for which many a limb has been amputated, and which I trust the author of this able article would have saved, even in field practice. I must confess that my views have materially changed, as the result of experience, but this change has been in favor of conservative surgery; hence I would not indorse the language used by a distinguished surgeon, after a recent battle, who said, "that in one hospital there had been one hundred amputations and no deaths," for this reason, that if one hundred amputations had been performed in one hospital, there could not have been any conservative surgery practiced. Since no hospital contained more than five hundred patients, this would make a percentage of amputations to the wounded of one to every five. Besides, I trust that if they had waited for some days, instead of one hundred amputations and no deaths, the record could have been forty-five recoveries and fifty-five deaths, and even at this, the survivors can only boast of a mutilated body. Such a record remains as a lasting disgrace to American surgery, when it is known that hardly a case was reserved for resection or other conservative surgery. Still, when amputation becomes a necessity and is decided upon, I think the rules as laid down in the Sanitary Report, and designated as "the point of selection," are so applicable, that I will quote them in full:

"Modern surgery has abundantly shown that as a general rule, the risk is greater in proportion as the size of the part which is amputated increases, and as the line of amputation approaches the trunk; in fact, the nearer to the trunk the greater the danger. Therefore:

1. As a general rule, other things being equal, save as much of the limb as possible.

2. When time is of consequence, disarticulation of a phalanx is sometimes preferable to the division of the bone in its continuity. Disarticulation of the toes is always preferable, except, in some cases, the first phalanx of the great toe may be divided through its middle portion.

3. However extensive may be an injury to the hand, endeavors should be made to save a portion of it, if it be only one or two fingers. Especially should an attempt be made to preserve the

thumb, and even in the very worst looking cases, such is the great reparative power of nature in these parts, that the surgeon may generally accomplish much in this respect.

4. Where time is of consequence, and even in most cases, disarticulation at the wrist-joint is preferable to an attempt to save a few of the carpal bones.

5. In gunshot injuries of the foot, attempts may be made to save a portion of the member by either of the methods recommended by Hey, Chopart, Pirogoff or Syme. In place of Hey's operation, the disarticulation of the metatarsal bones from the tarsus being often troublesome, it is better to saw through the metatarsus just in front of the tarsal articulations. Should disarticulation at the ankle-joint be practiced, the removal of the malleoli must not be forgotten.

6. Other things being equal, it is best to save as much of the leg as possible, not exceeding three-fourths, in order for the better adaptation of an artificial limb.

7. In the rare cases which admit of its adoption, excision of the head of the femur is to be performed in preference to disarticulation, as being the least likely to lead to a fatal issue. When it is determined to perform amputation, it should, if possible, be made through the trochanters of the femur, rather than at the hip-joint.

8. In selecting the point for amputation, it must be remembered that, in gunshot wounds, the injuries are often far more extensive than they at first sight appear. Care therefore should be taken that the anxiety to preserve as much of the limb as possible, does not influence the surgeon's better judgment, to the detriment, and perhaps even to the loss of his patient, from subsequent sloughing and gangrene."

Since the time specified at which an operation should be performed, and the directions in this Sanitary Report so applicable to all operations, excision, amputation, or the simple removal of spiculæ and other foreign bodies, I quote further from it. It says:

"In army practice, on the field, amputation, or excision, when necessary, ought to be primary. Patients, in most cases, cannot bear removal from the field without increased danger, neither can they have afterward the hygienic attentions which secondary amputations must necessarily require. Therefore,

1. Amputate, or excise, with as little delay as possible, after the receipt of the injury, in those cases where there is intense suffering from the presence in the wound of spiculæ of bone, or other foreign bodies, which the fingers or forceps cannot reach.

2. In those cases where a limb is nearly torn off, and a dangerous hemorrhage is occurring, which cannot be arrested.

3. In those cases where it is *clearly* seen that the patient is not suffering from immediate collapse, or great nervous depression, a condition which will probably come on if there is any considerable delay. If the shock or collapse is extreme, the operation must be postponed, until, by appropriate measures, reaction is sufficiently established.

4. In certain cases, where the collapse is not extreme, the use of sulphuric ether, as an anæsthetic agent, often has the effect of bringing about moderate reaction. Such cases would formerly have required delay."

As to the "hints for after treatment" of amputation, I think them so good that I will give them an insertion, as being applicable to the after treatment of all gunshot wounds, exsections as well as amputations.

"HINTS FOR AFTER TREATMENT.

"1. Where a wound is extensive, as in case of amputation, or excision, it is far preferable to leave the wound open, with a piece of wet lint, or a thin compress, interposed between the lips, for two or three hours, until the surface has become glazed. In this way, as reaction comes on, hemorrhage may be often avoided, or if it does occur, is easily controlled without the disturbance of the dressings.

There need be no fear as regards the number of ligatures applied. It is better to employ too many than too few, at the time of operation.

2. The dressings of a stump should be as simple and as little cumbersome as the case will in any way admit of. A narrow strip of water-dressing should be laid along the edge of the incision, over the strips of adhesive plaster, and the part should be so arranged that one end of the incision may be most dependent, in order to facilitate the escape of all discharges. An outlet for this purpose should never be neglected.

3. The position of the stump is of the utmost importance. By proper attention to this point, the edges and surfaces of the incision may be brought into contact, and the patient is spared the pain and uneasiness which, under other circumstances, the tension and pressure, necessary to bring the parts together, must invariably produce.

4. If the dressings are properly applied, as a general rule, these need not be changed for several days after amputation. Much mis-

chief is undoubtedly done by a too hasty removal of the first dressings.

5. After removal of the first dressings, if union has not taken place by adhesive inflammation, and suppuration has commenced, with much heat and tenderness about the part, a poultice may be advantageously substituted for the water-dressing.

6. In all cases where there is much suppuration, and tendency to bagging of matter, the parts must be well supported by bandages.

7. Although complete primary union is desirable, the surgeon should not be over anxious to bring about this result.

8. Of course, in cases where, after amputation, transportation of the patient to any considerable distance is contemplated, or likely to occur, the dressings must be so arranged, that any such removal will not disturb the parts, and thus interfere with the safety or speedy recovery of the individual."

The following are the rules which I have adopted for amputation, after careful study and experience, some of which I have taken from the Sanitary Report on "Amputation."

1st. "Cases where a limb is nearly or completely torn away, leaving a ragged stump."

2d. "Cases in which the soft parts of a limb are extensively lacerated or contused, and the principal arterial and nervous trunks destroyed and the bone denuded or fractured."

3d. "Cases in which a similar condition, of the soft parts, exists without either fracture or denudation of bone."

4th. Cases in which the artery or arteries are destroyed, so as to cut off circulation below the wound—and where gangrene would follow—circulation ceasing and the extremity becoming *cold.*

5th. Compound and comminuted fracture of the knee-joint requires amputation—while the passage of small balls which do not shatter or open the joint too extensively do not necessitate amputation.

6th. Compound and comminuted gunshot injuries of the ankle-joint, made by minnie balls, may require amputation, particularly where material injury is done to the arteries. Ordinary gunshot wounds of the same joint do not necessitate amputation.

7th. Compound and comminuted gunshot injuries of the femur or tibia which extend into the knee-joint may require amputation.

The foregoing rules are those which I consider applicable to amputation. I will now proceed to give such rules as seem to me most reasonable, as governing excision, and shall hence assume that the main arteries are uninjured, and the parts beyond the wound possessed of full vitality.

1st. Excision should be confined to the upper extremities—the shoulder and elbow being the principal parts upon which that operation should be practiced.

2d. If the head of the humerus is shattered by a gunshot, excision is the only remedy. If the comminution extends to the shaft, the loose portions only which are deprived or periosteum need be removed—the residue left to granulate. If the glenoid cavity is crushed it can be removed with a chain saw, or its injured portion gouged out.

3d. If the elbow-joint is crushed or comminuted by a ball, excision is the only remedy. If the injury is confined to the articulating end of the humerus, remove it; but do not disturb the ends of the radius or ulna—on the contrary, if the injury be confined to the articulating ends of the radius, or radius and ulna, remove both, but not the humeral articulation.

If the articulating ends of the humerus, radius and ulna are crushed, remove them all. What is meant, in the books, by partial excision is the removal of a portion of the joint—such as a part of the humeral articulation—or the articulating ends of the radius or ulna only.

On the contrary the removal of the entire half of the joint results in a new articulation, and not in anchylosis, as is often the case in partial excision. If the comminution extends to the shaft of the humerous or radius and ulna, remove its loose spiculæ and leave the rest to nature.

4th. In comminuted compound fracture of the carpel end of the radius or radius and ulna, excision of the articulating ends affords the most reasonable prospect of success. Leaving it to nature is far preferable to amputation. Never amputate for this injury.

5th. Compound gunshot injuries of the carpus or metacarpus, seldom if ever require either excision or amputation. Remove the loose bones and treat as a simple wound.

6th. In compound gunshot injuries of the phalanges, excision can be practiced only with varying success, owing to the size of the bullet and the smallness of the member. The rule is to save as much as possible. Injuries to these parts, sustained by buckshot or pistol balls, do not, as a rule, require amputation. On the contrary, most of them can be saved.

7th. In compound and comminuted injuries of the humeral shaft, excision or amputation should never be performed. The loose spiculæ should be removed, and the case treated as an ordinary compound fracture. If, however, the comminution extends to the articulation, it should be excised with the loose spiculæ, while the

fragments of the shaft, which still retain their periosteum, should not be disturbed.

8th. The same rule applies to the shaft of either or both bones of the forearm. In all cases avaid constriction by bandaging.

9th. The treatment of compound and comminuted fractures of the thigh becomes a matter of serious consideration, since it involves many important points. Statistics from the Crimean war show that in amputation through the hip-joint, all died. In the upper third 87.0. In the middle third 60.0 died. In the lower third 56.6 died; while the present war will, I think, demonstrate that even a greater proportion than this prove fatal.

Excision of the *shaft* is evidently out of the question, since all die after the operation. The question then arises, shall we amputate, or shall we treat such cases as ordinary compound fractures? I prefer the latter, and have from the first thought it the most reasonable treatment. The plan I propose is to place the patient on a bed or stretcher, extend the limb as near as possible to its normal length, without giving too great pain—retain it in that position by fastening the foot to the foot of the bed or stretcher by means of adhesive plaster, as in ordinary compound fractures, as I have on various occasions illustrated.* Make the counter extension thereon by converting the bed or stretcher into an inclined plane by elevating the foot, against which plane the body impinges, thereby producing counter extension, or the use of a perinæal belt fastened to the head of a bed or stretcher. To obviate inversion or eversion of the foot, place bags of sand on each side of the foot. There should be no bandaging of the leg or thigh. If collections of matter follow, free incisions may become necessary to relieve constrictions and to facilitate the discharge of such matter and spiculæ of bone. Irrigation or the application of cloths wet in cold or warm water must be continued to the limb until inflammation has passed off.

Under no circumstances must the patient be removed from the bed or stretcher until consolidation of the bone is considerable, when artificial support can be given, and the patient allowed to go about on crutches. In this way I contend that many more lives can be saved than by amputations, and of necessity with less mutilation. Hence, do not amputate for compound and comminuted fractures occurring in the shaft, neck, or head of the thigh bone.†

---

* See Transactions of the N. Y. State Medical Society for 1861. Also, Medical and Surgical Reporter, and American Medical Times, same year.

† I here present the condensed report of W. Van Steinburgh, M. D., Surgeon to the 55th N. Y. S. V., who says he has treated 21 cases of compound and comminuted

If the head of the femur is detached and the joint opened, it may require removal. This, however, may be a point for future consideration.

10th. Gunshot injuries of the cancellated structure of the bones which enter in the formation of the knee-joint, do not necessitate amputation.

I have seen several instances in which the ball had passed through the head of the tibia without wounding the joint, and still the patients are recovering with good limbs. One case where the ball

---

fractures of the thigh, two of which died. Of these there were thirteen fractured in the upper third and one death; twelve fractured in the middle third and one death; six fractured in the lower third and no death.

These were treated by extension, supported by sand bags applied in the long axis of the bone. This notice is due to the doctor's sagacity and skill. The profession should know the comparative results, and I therefore submit his table and remarks entire. If the doctor could have taken the same cases from the field, and before material injury was done to the soft parts by bandaging and rough movement, placed them on stretchers and kept them thereon with appropriate extension, his success would have been much more perfect, since, after irritation and forcing of the muscles has to any considerable degree taken place, extension cannot be effected as it could at first, and hence the imperfection spoken of.

Lee's Mills, amputation, primary	7	5	died.
Lee's Mills, amputation, secondary	5	5	died.
Total	12	10	died.
Williamsburgh, secondary, excisions of shaft	12		all died.
Williamsburgh, secondary, extension of shaft	1		recovered.
Big Bethel, by extension	2		recovered.
Fair Oaks, by extension	9	2	died.
June 30th	3		all recovered.
Malvern Hills	3		all recovered.
Bull Run 2d	1		recovered.
Chantilly	2		all recovered.
Upper third	3		1 death.
Middle	12		1 death.
Lower	6		0 death.
Total cases	21	Total deaths.	2

Out of twenty-one cases of compound and comminuted fracture of the thigh, taken indiscriminately, 19 recovered with tolerably useful limbs.

My plan of treatment has been by simple extension as taught me by Dr. Swinburne. One case I will relate as well as possible from memory. Adj. Wallace, 1st N. Y., was struck by a rifle shot at the junction of the lower and middle third, the ball passing directly through "antero posteriorly" comminuting the bone and driving the fragments into the muscles of the posterior part of the thigh. These I removed, and placed him on a stretcher, making extension from either end of it. I placed a leg of an old pair of knit drawers filled with sand upon each side of the broken limb, and told him not to suffer any one to remove him until he reached the General Hospital. He was taken to Washington and there placed upon a bed and the extension kept up. The wound was made on the 30th June, and in October he returned to the regiment with a leg two inches shorter and foot everted. The eversion was the result of neglect in treatment evidently.

was found to have passed through the insertion of the *ligamentum patellæ* and deep into the cancelli, was removed by the trephine, and the patient did well. Another also did well, in whose case the ball was extracted from the cancelli of the external condyle of the femur. Therefore, unless a fracture of some magnitude extends into the joint, do not amputate.

11th. In compound and comminuted fracture of the knee-joint, I should advise amputation; though there may be wounds made by bullets through the joint without doing much injury to the bone or soft parts, in which case it may be advisable to try to save the limb. This seems more advisable when we take into consideration the facts as recently elucidated by Dr. Lewis A. Sayre and others, that the joint can be opened freely without much risk of fatal results, while the cases spoken of in this paper in which the patient recovered after ligation of the femoral artery, added to the fact of the frightful mortality attendant upon amputation even in the lower third of the femur, and we have, I think, data sufficient to warrant the effort to save the limb where there is not great comminution of the joint.

The simple fact that a ball has been, or is, imbedded in the cancellated structure of the head of the tibia or condyles of the femur, does not warrant us in resorting to amputation, and particularly where the joint is not opened.

I have, in many instances, removed balls from those positions by the trephine and gouge.

12th. In compound and comminuted fracture of the shaft of the tibia, or even tibia and fibula, from bullet wounds, amputation should not be practiced, since hundreds who have accidentally *escaped* the surgeons have recovered with but slight deformity. I think as many will survive by simply treating these injuries as if they were ordinary compound fractures from any other cause, as would from amputation, and, of course, with much more useful limbs.

I now know of at least a dozen cases which were destined for amputation that are now recovering, and most of them will be as perfect as they were before the injury. As soon as practicable after the injury, the wounded man should be placed on a bed or stretcher and kept thereon until consolidation of the bone takes place, or until removed to some permanent place for treatment extension sufficient to keep the limb to near its normal length; lateral support given by means of sand bags placed longitudinally to prevent inversion or eversion of the foot as well as for the proper support of the limb; extension kept up with no bandaging and

the treatment proceeded with as previously detailed in analogous injuries of the thigh, or as if it were an ordinary compound fracture of the leg, but under no circumstances should excision be practiced. All that can be required is to enlarge the incision and remove loose spiculæ and other foreign bodies. I may here state that the great and potent reason why so many compound fractures do badly, is the fact that the injured limbs are either bound up tightly with bandage and splints or carried from hospital to hospital without even the support of a stretcher, a proceeding which destroys even a limb with simple fracture, how much more one of compound and comminuted fracture.

13th. Simple gunshot injuries of the ankle-joint do not necessitate amputation, while compound and comminuted fracture of this joint, and particularly when the arteries are much injured, may require amputation. Though with proper support, water dressings, irrigation, free incisions, &c., a great majority will recover without operative interference.

The same rule is applicable to gunshot wounds of the foot as of the hand, and I can safely say, that there is scarcely a bullet wound of the foot which requires amputation. I have seen the whole scaphoid bone carried away and still a good recovery take place. So the destruction of the astragalus may occur and still recovery go on favorably. See the case of Garibaldi, in whose ankle-joint a ball remained for some weeks and without unfavorable results.

15th. In compound and comminuted gunshot injuries of the tarsal and metatarsal bones, the same rule of action should be adopted as in like injuries of the hand, with the exception that a slight deformity is not of such vital importance in the former as in the latter.

16th. *No excision or amputation should be performed in this second or inflammatory stage.** If the operation cannot be performed before this stage sets in, we ought to defer operation until the true second or suppurative stage appears.

In conclusion, I cannot urge too strongly the importance of having an abundance of stretchers for the immediate relief of the wounded, and particularly those wounded in the lower extremities, to which can be attached an India-rubber cover in cases of heavy dews or rains. By this means the patient is treated more successfully for some days after injury, than if he were transferred to close and illy-ventilated hospitals, houses or even tents, since the danger

---

* The second stage here spoken of is the true congestive stage, or one intermediate to the first and second stage of authors.

of foul and pus-generating air is avoided. These appliances keep them from the wet above as well as below. There should be at least a sufficient number of these stretchers to supply all cases of amputations of the lower extremities as well as of compound and comminuted fractures of the same. Where any effort is made to save the limb without them, our efforts prove futile, since the bedstead or stretcher becomes the splint. So in all cases of wounds of the trunk. In excision of the shoulder or elbow-joint, or in any severe injury of the shaft where an attempt is being made to save the limb, these appliances are, to say the least, great auxiliaries to the successful treatment of this class of injury.