

give little protection. The ground is so porous and its surface configuration so irregular that the heavy rainfall is either absorbed or drained off in a short time.

Such are the conditions before the army medical officers of the Fifth Army Corps at the present time. Whether they will be able to control the disease by prompt isolation of yellow fever cases, and the removal of regiments from infected localities remains to be seen. Up to the time of the surrender they were handicapped by the military necessity which required the troops to occupy certain lines, irrespective of yellow fever infection, and during that time the slow progress made by the disease shows the influence of their restrictive measures. It is to be hoped that they will be able, under the better conditions now existing, to embark the regiments for the United States with a clean bill of health, while the immune volunteers take their place as the garrison of Santiago.

#### WOUNDS AND DISEASE AT THE FRONT.

Medical officers returned from Cuba with sick and wounded from General SHAFER'S command have given us interesting details of the medical and surgical work during and after the engagements at Santiago. On the debarkation of troops at Baiquiri they were pushed rapidly forward, each man carrying his blanket roll and three days' rations. Regimental surgeons with their hospital corps men accompanied their respective commands; but all regimental medical and surgical chests, dressings, etc., were of necessity left behind, as no horses or mules had as yet been landed. Surgeons applied to higher authority for their medical property and sent back to Baiquiri to endeavor to recover it; but in the meantime the vessels, emptied of troops, had been ordered out of the harbor and had gone to ports unknown or lay too far out at sea, with no way of communicating with them. Ultimately a launch was procured and some of the regimental medical supplies were gathered up from such of the transports as could be reached. Thus, although the army had embarked with adequate first aid supplies, only a percentage of them was available when the time came for their use. Fortunately, however, the men carried the necessary dressings on their persons, for every soldier of the army, with the exception of the men of one regiment, was provided with the official first aid dressing packet containing two antiseptic compresses of sublimated gauze in oiled paper, one antiseptic bandage of sublimated cambric with a safety pin and one triangular bandage, also with a safety pin. Fortunately also, the arrival of the ambulances from Tampa and of the *Relief*, the hospital ship despatched by the Surgeon-General to meet just such an emergency, put an end to what would otherwise have been a difficult situation.

According to Captain E. L. MUNSON, who was one of the operators at the field hospital, surgical opera-

tions were required only in shell wounds. Wounds by the Mauser bullet were apparently either immediately fatal on the field or trivial in their subsequent course. There were no explosive effects from the brass jacketed bullet of the Mauser rifle, the wound of exit in most instances being scarcely larger than that of entrance. Long bones were usually perforated, without comminution, often even without fracture. Only about thirty-five cases required splints. Abdominal wounds were classed among the immediately fatal, as few of them were seen in the hospital. There was little hemorrhage. The Mauser bullet deformed frequently, but even then it did not make the ghastly wounds that were expected. Keyhole wounds made by the bullet when striking with its long axis were fairly common. Many bullets, even when fired at short range, lodged instead of perforating. In eight out of forty-one consecutive cases the bullet was lodged. This was attributed to an inferior or a deteriorated character of the powder in the cartridges supplied to the Spanish infantry. Antiseptic first aid was eminently successful, wounds healing quickly under a scab.

Malarial fevers were infrequent at first but after the rains began to fall they became quite prevalent. A number of cases of typhoid fever and measles occurred, due to infection brought with the troops from the United States. Heat exhaustion and a mild type of sunstroke incapacitated a number of men from duty. Diarrheas and dysentery are rare, a fact attributed to the purity of the water supply. Baiquiri is supplied by a pipe-line from the river of the same name, a pure, limpid stream flowing rapidly over a pebbly bed. The water at Siboney comes from the pipes of the Juragua Iron Company, which run to their wharves near the city of Santiago, following the tracks of the company's railroad for about twelve miles. The hospital is pitched close to this pipe at Siboney and has thus an easily available and unlimited supply of pure water; while at the front the troops obtained water from springs and from the Aguadores, a branch of the San Juan river. Yellow fever is of course the disease in which is centered the interest of the medical officers at the front.

#### CORRESPONDENCE.

##### Treatment of Tetanus.

AUSTIN, TEXAS, July 20, 1898.

*To the Editor:*—I send you report of a case of tetanus treated successfully by the use of antitetanic serum. The diagnosis of the case I believe to have been correct, as shown by the history, the symptoms, the response to each dose of the serum, and, further, that the patient lived ten miles in the country, and was not familiar with the symptoms of tetanus.

A study of this case shows the immediate response to the antitetanic treatment, *i. e.*, the pulse, temperature, pain, stiffness and restlessness were all reduced soon after the injection was given. It can further be seen that the dose of serum should have been repeated sooner in this case; but owing to

the inaccessibility of the patient it could not be done. There were no unfavorable effects from the use of the serum, not even an eruption.

I give the case in detail, as follows: On June 14, I was called to see a case of tetanus, in consultation with Dr. F. A. Maxwell, near Austin, Texas. Minnie T., age 19 years, weight 180 pounds, of robust constitution, on June 6 was in the cow and horse lot and stepped on a rusty nail which entered the fleshy part of the foot for some distance; the nail was removed, there was but little bleeding, turpentin was applied externally and no more notice taken of the foot other than that caused by the attendant soreness usual in such cases, until the afternoon of June 13, when she noticed sharp pains in the wound, running up the leg, especially noticeable when pressure was made over the seat of injury; also pains extending up the spinal column, especially the neck, with a decided stiffness of the jaws and a twitching of the muscles of the arms and legs at times and much nervousness and excitability. Dr. Maxwell had examined the foot, found it tender in the neighborhood of the wound, which had healed, and he made an opening and washed it out with carbolic acid solution and ordered it poulticed to relieve the pain; gave doses of calomel to move the bowels and left potassium bromid to be given every few hours as indicated. The next day I was called in consultation with Dr. Maxwell and found the patient with a pulse of 108, temperature 99.5 degrees, very restless; the pains seemed to run from the foot up the leg and extend on up the spine; there was much stiffness of the jaws; she could, with much difficulty, open the teeth as much as half an inch; peculiar sensations, as she described them, would run up her back and the slightest breeze was sufficient to bring them on. Dr. Maxwell and I decided to administer antitetanic serum at once. We thereupon, at 4 p. m., June 14, injected subcutaneously, in the right gluteal region, one-third of a ten c.c. bottle of fresh liquid antitetanic serum (Parke, Davis & Co.), using the regular antitoxin syringe and observing all antiseptic precautions. The patient was seen again at 10 p. m. She had slept from 6 to 9:30, felt well, pulse 90, temperature normal, stiffness greatly reduced in jaws and slight perspiration.

June 15—Seen at 10:30 a. m., pulse 73, temperature normal, no pain; but tenderness in the muscles of the foot, a little stiffness in the jaws; had rested well the night before until 5 a. m.; she was then given potassium bromid and slept quietly until morning.

June 16—Seen in the forenoon, she was a little restless, slept well the night before, condition as on former day, except pulse more frequent (90), temperature normal; at 6 p. m. was more restless, complained of the jaws, soreness in the limbs, pain in the stomach, temperature 99, pulse 96; the second dose of the serum was given, also potassium bromid and chloral hydrate.

June 17—Patient slept well the night before, all the symptoms had improved and the pulse and temperature were normal.

June 18—Found the patient much improved in appearance, temperature 99, pulse 80, cheerful, no nervousness, though complained of tired feeling in the muscles of the jaws when the mouth was opened widely; had been gaping all through the day; could open the mouth widely and had eaten a good dinner.

June 19—Temperature normal, pulse 80, restless until twelve o'clock the night before and then slept well; appetite good; complained of some pain in the foot and leg.

June 20—Temperature 99, pulse 90, rested well the night before but complained of some stiffness in the jaws at times and other symptoms seemed to indicate a recurrence of the attack; she was given, therefore, the last third of the bottle of antitetanic serum; the symptoms gradually disappeared and she made a complete recovery and today shows no evidence of the attack.

Remarks: 1. The serum treatment offers the best chance for life in cases of tetanus; it should not be relied on entirely, however, but other remedies should be used when indicated. 2. The treatment should be used early, preferably as a prophylactic, and the dose should be repeated as soon as any unfavorable symptoms appear. 3. The antitetanic serum should be of the best quality, injected with an antitoxin syringe and under antiseptic precautions.

Yours fraternally,

MATTHEW M. SMITH, M. D.

### The Bill was Disallowed.

CHICAGO, ILL., July 20, 1898.

*To the Editor:*—I wish to call your attention to two cases which will be of interest to the medical profession.

On March 25 I appeared before Judge Kohlsaat with a bill for \$25 for professional services against the estate of Byron A. Baldwin. My bill was for administering an anesthetic and assisting at an operation. The surgeon's bill, presented at the same time, was allowed after being cut down. My bill was taken up immediately afterward, when the judge delivered himself, in substance, as follows: Haven't I just allowed one doctor's bill against this estate? When one doctor is paid, they are all paid; I can't have half a dozen doctors coming here making claims against this estate. If you are entitled to anything you must look to the other doctor for it. The bill is not allowed.

The following is from the *Chicago Record* of July 12, 1898: "WINE BILLS ORDERED PAID.—The club dues and wine bills of John Borden Ketcham, over whose estate there was much litigation after his death last fall, were ordered paid by Judge Kohlsaat yesterday. Among the claimants who appeared with unsatisfied bills were the Washington Park Club, \$31; the Chicago Club, \$53; the Gardiner Commission Company, \$178, and the Bodega Wine Company, \$25."

From this, one is justified in inferring that the judge thinks it scarcely necessary that doctor bills should be paid, or that a man is not entitled to the services of more than one doctor at a time; and that wine bills are sacred, and that a man may patronize as many liquor dealers as he chooses. If the judge's ruling in this case is in accordance with the law, it behooves doctors to collect in advance for all consultations and for surgical operations, where more than one doctor is always required. But then the judge's office-boy knows that this is not law, but caprice.

Yours truly,

D. H. GALLOWAY, M.D.

200 Oakwood Boulevard.

### Inebriates in the Army.

HARTFORD, CONN., July 20, 1898.

*To the Editor:*—I have received two very urgent letters for my opinion on what is asserted to be facts in relation to the appointment of several persons to very responsible positions in the army. It is said that these persons are moderate and periodic drinkers of spirits, who are frequently intoxicated, and I am requested to write an opinion of such persons and their disabilities for such service. I can not say anything of the individual cases mentioned, but the same business principles should prevail here as in civil life. The moderate or periodic drinker is not considered a safe man in positions of responsibility, no matter what his capacity may be otherwise. In the early days of the Civil War, a number of inebriates were in responsible positions on both sides, and some way sad disaster followed their bad judgment. In those days the delusion prevailed that alcohol was a real stimulant and tonic, and in times of great strain a valuable help. Some most bitter experiences disproved this, and the last years of the struggle found nearly all the leading officers in command total abstainers, at least those in active duty on the battle-field. The moderate drinkers, and the men who drank to give them force and