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CURIOSITIES

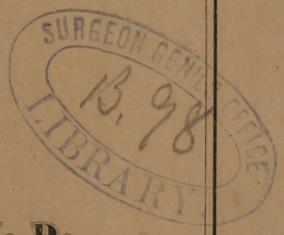
— OF —

Medical Experience

— ON —

STATEN ISLAND:

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By W. C. Anderson, M. D.

A PAPER read before the RICHMOND COUNTY MEDICAL SOCIETY,
April, 1877.

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STAPLETON, N. Y.

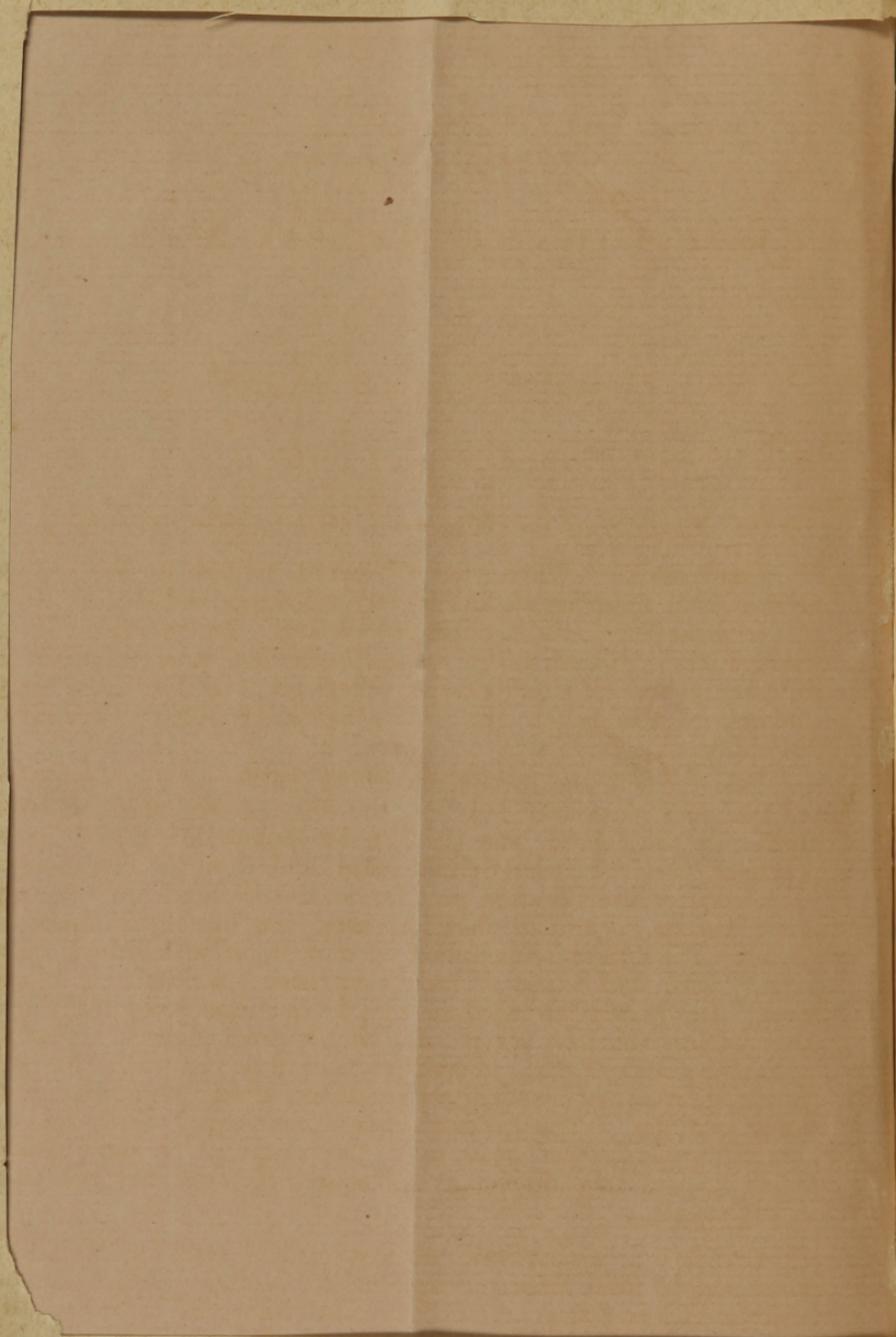
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CURIOSITIES OF MEDICAL EXPERIENCE

ON STATEN ISLAND.

To the Members of the Richmond County Medical Society:

GENTLEMEN:—When your President invited me to read a paper at the April meeting of this society, he suggested that some account of my experience might prove interesting. In casting a glance back through the vista of thirty years, I remember some things out of the ordinary course of a physician's experience, and they have suggested the title of this paper, viz: "CURIOSITIES OF MEDICAL EXPERIENCE ON STATEN ISLAND."

When I left the institution where we are now assembled, to enter the field of private practice, the only practicing physician in this section of the Island, was the late Dr. Samuel R. Smith. He had practiced here for twenty-eight years, and from the rich stores of his experience in the diseases peculiar to the island, I derived many valuable lessons. Among these diseases, was one which the profession elsewhere had been accustomed to look upon with dread, and which happily they had found of rare occurrence. I refer to traumatic tetanus. Dr. Smith informed me that tetanus was exceedingly common. That during the first six months of his practice here, he had no less than seven cases: two idiopathic and five traumatic, an unprecedented number in our climate, occurring among a population of only 6,000 or 7,000. The following cases are copied from Dr. Smith's note book, somewhat abbreviated, but sufficient to show the nature of the disease then prevalent on Staten Island, and the treatment then adopted:

CASE I.—"On the 24th of May, 1828," says Dr. Smith, "I was called to see Mrs. Betsey Shepperd, aged about forty, who was laboring under an attack of tetanus, produced by cold. Her constitution was naturally strong, but for a few months past she had become debilitated from leucorrhœal discharge and lately had an attack of acute pleurisy from which she was just recovering, when exposure to cold and wetting her feet with cold water induced the present

attack. She had several times before suffered from spasms of the stomach, and in one instance accompanied with trismus. In the present instance the symptoms came on rapidly, and soon were accompanied with opisthotonos, the patient during the paroxysms resting entirely on her heels and occiput. Trismus soon ensued, and each spasm seemed, from its violence, as if it would be the last. The pulse was small and weak, but not altered from natural in quickness and frequency; the abdominal muscles retreated towards the spine, and the bowels constipated. The difficulty of deglutition was very great, every effort of swallowing producing a spasm. The patient having lost a tooth, I was enabled to introduce liquid medicines. I commenced by giving black drop and laudanum in large doses every two hours, and as a stimulant and cathartic the spirit of turpentine in as large doses as the stomach would bear; and also the turpentine enema thrice a day. I also covered the whole epigastrium with a mustard poultice, and applied another to the back of the neck, and when they became quite painful they were removed and plasters of cantharides applied in their place to keep up the irritation. These conjoined means afforded the patient some relief; the spasms were lessened in frequency but not in violence. The head was much confused in consequence of the quantity of opium administered; the patient lay in a partially comatose state, and was with difficulty roused. The spasms recurred at irregular intervals. The bowels were slightly moved on the second day, and on the third they were freely evacuated. The spasms became less frequent and violent, and on the fourth day the muscles of the jaw relaxed. Some degree of fever now occurred, but soon yielded to the appropriate remedies, and left the patient in a very debilitated state, for which tinct. cinchona was prescribed. She now began to complain of pain in her left side, with swelling of the spleen, followed by general anasarca. She was put on the use of tinct. ferri mur., alternated with pills of calomel, gamboge and squills, which quickly relieved all these unpleasant symptoms, and the patient was soon restored to better health than she had enjoyed for many months."

CASE II.—"This was a case of traumatic tetanus. The patient, James Butler, aged forty, ran a nail into his foot; the wound healed in a few days, and about a fortnight after the receipt of the injury he went into the water, and soon after complained of pain in the wounded foot, extending up the leg, and eventually to the sternum, thence through to the back, up to the neck and to the muscles of the lower jaw. The muscles of the neck and jaw were very sore and stiff, and when the spasms began the pains in them and in the epigastric region were excessive. The attending physician, Dr. Williamson, had bled the

patient in the foot; reopened the wound, and filled it with emplastr. cantharides, and put him upon the use of calomel and opium. The cantharides excited no discharge from the wound, and the symptoms were increasing in severity from day to day, when, on the sixth of August, I was called in consultation with Dr. W. The spasms had been less frequent during the preceeding night. The pulse a little hard but not more frequent than natural; tongue slightly coated with a whitish fur and the gums beginning to get tender from the effects of the mercury; continued the calomel and opium. Seventh, patient much the same; had a severe spasm during the night; continued calomel and opium, and applied blister plasters to the arms and legs. Dr. Andrews, of Perth Amboy, who has obtained much celebrity in the treatment of tetanic cases, (having cured five out of seven,) had been sent for but did not arrive in time to meet us.— When he came he bled the patient, gave him an active emetic, and after free vomiting, a powerful cathartic. This was followed by muriate of ammonia, gr. xx. every two hours as an anti-spasmodic; the patient in a short time felt greatly relieved. Eighth, patient better; pulse softer and much more frequent; tongue covered with a bilious fur; bowels relaxed; spasms slight, and the wound in the foot beginning to suppurate; mur. amm. was continued every six hours, and the pulvis antimonialis every two hours. This treatment was continued three days, when all symptoms of tetanus had entirely disappeared.

CASE III.—This was the case of a colored man, forty years of age. Dr. Smith had been called on the evening of September 3d. The patient was of spare habit but of good constitution. Twelve days before he had also run a nail into his foot. The wound healed and he felt no uneasiness until the 1st inst., when a pain began in the foot, gradually extended up the leg, and finally to the sternum, back, neck, and muscles of the jaw, with considerable retraction of the muscles of the abdomen towards the spine. The jaws were closed to about half an inch, and at each recurrence of the spasms, which was about once in five minutes, they were completely closed. Other symptoms as in the other cases, very minutely detailed by Dr. Smith but which I do not copy here, as my object is merely to give you a picture of the disease as it occurred here, together with an outline of the treatment. In this case Dr. Smith began with free venesection. He opened a vein in each arm and bled to the extent of forty ounces, but without inducing syncope. An emetic of antimony and ipecac was then given, but without effect. Sulphate of zinc was then tried, and free emesis was produced. After the emetic had operated, 12 grains of calomel, with 2 grains of opium, were administered, which was followed every two hours with 2 grains of calomel and $\frac{1}{2}$ a grain of opium. On the 4th spasms

increased in violence, v. s. xxiv. ounces, with a tendency to syncope; followed immediately by 40 drops of solution of citrate of morphine and calomel gr. ij., opii. gr. j. Rept. every two hours. On the 5th, patient much the same; gums a little tender. Gave an emetic of tartrate of antimony and sulphate of zinc, which operated freely, discharging a large quantity of thick mucus and some bile. Applied a plaster of soft soap and quick lime to the wound; omitted the calomel, and directed tr. opii. 1 drachm every 2 hours. In the evening of that day the doctor found the patient freely salivated: the spasm much lessened in violence and frequency. Ordered for the night, tr. opii. sulph. ether aa 1 drachm every 2 hours; wine whey ad libitum. On the 6th, the bowels being constipated, cal. gr. xij., pul. rhei. 30 grains, div. in four powders, one every hour, followed by an infusion of senna and salts. The opium was omitted, but obliged to be resumed again on account of recurrence of spasms. The wound in the foot now beginning to suppurate, on the 7th the patient was improving, which continued until the 10th; then the ptyalism having nearly disappeared, the doctor says: "The spasms now began to increase, and the calomel was resumed, but before the system could be brought under its influence they were almost as violent as they had been at any preceding time; but as soon as ptyalism was re-established, they soon subsided, and in a few days entirely disappeared; but the mouth was kept sore for a few days longer to prevent a relapse."

CASE IV.—This was a case of traumatic tetanus, occurring almost simultaneously with the last, and in the same woman that is recorded in Case First as a case of idiopathic tetanus. This time she had run a bone into her foot, and tetanus supervened. The treatment was of the same heroic character, vs. ad deliquium. Black drop, laudanum and brandy were then administered in as large doses as the stomach would bear, and a plaster composed of soft soap and quick lime applied to the wound. In about eight hours the spasms relaxed, and the patient gradually recovered.

CASE V.—This was the first fatal case the doctor met with. A boy, aged 16 years, wounded his foot with some pointed substance on Thursday, September 25th. The wound healed without causing much inconvenience. On the Tuesday afternoon following, symptoms of tetanus began to manifest themselves. The family gave a teaspoonful of laudanum, and then the patient was seen by Dr. Williamson. Then an emetic was administered, without effect. The symptoms increased very much during the night. Dr. Smith saw him, in consultation, the next morning. He details the symptoms with tedious minuteness, which I pass over, noting only that the case differed from the previous ones, in that the pulse was hard and frequent. The boy was immediately bled to syncope, which

afforded some little relief. Powerful emetics were now exhibited, with only the effect of producing slight nausea. The patient sank under the violence of the paroxysms the same afternoon, less than twenty-four hours from the first accession of the disease.

CASE VI.—Was a fatal case of idiopathic tetanus. The details of the case I will repeat more at length, as there may be some question as to the accuracy of the diagnosis. The case resembles very much some of those cases which, three or four years ago, were regarded as cerebro-spinal meningitis. Dr. Smith says: "On the 18th of October, 1828, I was called to see Jacob Vanderbilt, aged 17, son of John Vanderbilt. He had been perfectly well to the noon of that day; had been at work that morning, but at breakfast had complained of pain about the shoulders, stiffness of the muscles of the neck and lower jaw, and the head was slightly drawn back. The pain then left the shoulder and settled in the small of the back." This was the condition in which Dr. Smith found him. He says: "The frequent recurrence of tetanus this season made me somewhat suspicious of the case, and consequently very minute in my examination and inquiries, which resulted in the conviction that the case was not tetanic; and I looked upon it rather as a rheumatic affection. The patient had received no wound, there was slight difficulty of deglutition, but unaccompanied by spasm, and there was none of that spasmodic pain about the ensiform cartilage which early characterizes the disease; the tongue perfectly clean and pulse natural, and in forming my judgment I took into account the infrequency of idiopathic tetanus in our climate, and likewise the shifting of the pain from the shoulders to the lumbar region. I prescribed a few grs. of calomel, to be followed in two hours by infusion of senna pediluvium at bed time, with diaphoretic draught and liniment to the spinal region. 19th. The cathartic operated freely, stools natural. The stiffness about the neck and jaw remained much the same until this morning, when it was observed to be accompanied by slight convulsive movements recurring at short intervals, and there was more difficulty of deglutition; these symptoms continued increasing until noon. The nature of the case was now no longer doubtful; the head was drawn further back, the abdominal muscles powerfully retracted towards the spine, and so tense as to have the hardness of a board, together with that peculiar tensive pain darting from the ensiform cartilage to the spine, and thence to the neck and jaw—all served to characterize it. The spasms recurred every ten or fifteen minutes, each one being harder than the one which preceded it. The pulse was hard and much increased in frequency, *during the spasms*; at other times nearly natural; the tongue lightly coated with a white fur. The patient was bled to syncope, which afforded some temporary

relief. Emetics were then administered, and increased to an enormous quantity, with only the effect of inducing nausea and a constant spitting of frothy, tenaceous mucus. The bandage was loosened from the arm and blood again abstracted until faintness was induced, in the hope that the emetic would then operate freely. One or two slight vomitings then followed, but it seemed impossible to stimulate the stomach to free emesis. A stimulating injection was then given to induce the emetic to act upon the intestinal canal, and in the course of the evening the bowels were freely and repeatedly evacuated, and the stools natural. Between four and five o'clock in the afternoon Dr. Harrison saw the patient, in consultation, and we determined to try the effect of the warm bath, but the necessary apparatus could not be obtained. We then resorted to friction over the abdomen with laudanum and camphorated spirits, blisters to the extremities, the internal use of calomel and opium, the introduction of mercury into the system by frictions with strong mercurial ointment, stimulating injections. Notwithstanding all these measures the spasms continued to increase in violence and frequency until the patient expired at 12 o'clock at night." Dr. Smith remarks: "The spasms in this case were confined to the muscles of the trunk, neck, and jaws. The arms and legs were perfectly flexible during the whole disease; and the mental powers in this as in all the preceding cases, unaffected.

A seventh case occurred on the Island in August of the same year, in a young man aged twenty, caused by a wound in the foot. It proved fatal in twenty-four hours. On the 12th of August, 1830, another son of the same Mr. Vanderbilt, aged fifteen years, was taken with the same symptoms as in the case just related; the treatment was the same, and he died on the day of the attack.

Since that period tetanus has not been at all as frequent. In my own practice I do not think I have seen on an average more than one a year. I remember but one case in the Seaman's Retreat during my connection with it of six years; and we have had but one case in the Smith Infirmary. In these cases of Dr. Smith, the symptoms are accurately noted, and are all found to be those of acute tetanus. Pain at the præcordium has been called by Chalmers, the *pathognomonic symptom of tetanus*. Some writers, according to Curling, have asserted, that when this symptom occurs, tetanus invariably proves fatal. Yet the first three cases recorded by Dr. Smith all had this symptom, and all recovered. The great frequency of tetanus at that time, it is difficult to explain. It is well known that the disease is most frequent in hot and moist climates, and in those in which heat is followed by sudden cold and moisture. No mention is made in the notes as to any peculiarity in the seasons of that period. A theory was prevalent among the

laity that the disease was caused by the use of putrefying fish for manure on the farms bordering on the sea-shore. I do not think much reliance is to be placed upon this theory. Tetanus was formerly much more prevalent in the West Indies than it is at the present day. In the army and navy of Great Britain, Tetanus is now much less common than in former years. Dr. Sind, who was physician to the fleet about the middle of the last century, has recorded, that after amputation, five cases out of six generally proved fatal from an attack of lock-jaw; whereas, at the present day, in the practice of the army and navy, its occurrence after that operation is comparatively rare, which is attributed to increased attention to sanitary requirements, and to the treatment of the wounded.

TREATMENT.—It must be admitted that the treatment adopted by Dr. Smith was remarkably successful. He speaks also of Dr. Andrews, of Perth Amboy, as having acquired a great reputation, having cured five out of seven of his patients. I remember hearing Dr. Smith frequently refer to Dr. Andrews's practice in tetanus, and that his chief reliance was upon mercury; in fact, he never lost a patient when he could succeed in effecting ptyalism. Other remedies were used as adjuvants, in order to bring the system under its influence. Mercury was introduced as a remedy for tetanus many years ago in the West Indies, and gained some repute; but later evidence has not been so favorable. Baron Larrey found that mercurial frictions rather aggravated the symptoms. Dr. Mosely mentions that many people have been attacked in the West Indies under a course of mercury, and expresses the opinion that it has "killed more than it cured." A great deal has been written for, and against, the use of mercury in tetanus. It is one of the great trials of our profession to reconcile conflicting testimony. I will only say for our departed member, he was a firm believer in the use of *mercury* and *opium* as the sheet-anchors in the treatment of tetanus.

HYDROPHOBIA.—Tetanus being a disease attended with such remarkable symptoms, one would hardly suppose that it would ever be confounded with anything else, yet there is another still more formidable disease, that many writers, lay and professional, have endeavored to represent as identical with it. This disease is *hydrophobia*. I think no one who has ever watched a case of the latter disease, could fall into this error. In tetanus the character of the spasms, and the normal state of the intellectual faculties seem to distinguish it from hydrophobia. In hydrophobia there is more or less aberration, a ruthless and sometimes ferocious state of excitement, accompanied with remarkable acuteness of the senses and an expression of countenance, and a manner so striking that when once seen they are never forgotten. The spasms, too,

are clonic, and of short duration, and are succeeded by a period of complete relaxation. But I will not detain you by any reference to the literature of hydrophobia, which has not been wanting since the days of Hippocrates. The description of a case which recently occurred on the island, will conclude this paper.

On the 17th of January, 1877, an interesting little girl, 9 years of age, while going home from school, stopped to pet a small spitz dog upon the head. The dog snapped at her hand and caught two middle fingers between his teeth, so that she had some difficulty in withdrawing them. She was bitten upon both fingers, and blood flowed from the wounds. She was at the door of her home so that no time was lost. Dr. Walser saw her soon after, living next door, and fully cauterized the wounds with nitrate of silver. When I arrived some four hours afterwards, I found that the parts had been sufficiently cauterized, and simply ordered a slippery elm poultice to be kept upon the fingers. I saw her upon the next and the following days, until the eschars, caused by the nitrate of silver, had separated, and then an ointment of oxyde of zinc was kept upon the parts until cicatrization had taken place. The child then returned to school, and continued well until I was summoned to her on the 16th of February. I found that on the 14th, just four weeks after the bite, she complained of having pain in the fingers. It was so slight, however, that she continued going to school on that day and the next. On the 16th, she had in addition, headache, and her mother kept her at home, and sent for me. I saw her at one o'clock p. m. She was at lunch, and had eaten with her usual appetite. She appeared bright and cheerful, and said she felt quite well. On a careful examination of the fingers I could discover no marks of inflammation, but on pressure along the course of the nerve, there were evidently sensitive spots, especially at the bend of the elbow, and in the axilla. She said that her shoulder pained her the day before, but now the pain was gone. Her pulse was 90, and the pupils were dilated; her eyes had a peculiar brilliant appearance, and I could not help observing a certain wildness in the expression of her countenance. These were all the symptoms that then presented themselves. No allusion was made to the bite she had a month previous, and on questioning her mother privately, she assured me that the little girl had no fears about it, and never mentioned it. I contented myself then with merely prescribing liniment saponis, to bathe the shoulder, if the pain returned during the afternoon.

On going to pay her another visit at 7 p. m., I met a messenger, saying that she was worse. Her mother stated that on attempting to bathe her shoulder, she was affected by a strange shudder-

ing. This took place repeatedly whenever she was touched; she attempted to drink some water, and turned from the glass with the same shuddering; she said it took away her breath. Her mother urged her to drink, but she turned away with the frightened look of the afternoon intensified. She was now in bed, pulse 100, tongue clean, complaining of no pain, and was disposed to doze quietly when not disturbed. I prescribed solution of chloral, gr. v, to morph. gr. $\frac{1}{4}$ to the teaspoonful, to be given in case of restlessness or pain. 10 P. M., saw her again; pulse 120; remains much the same; she had taken one spoonful of the medicine, and swallowed it with some difficulty; she was yawning and gaping, and, her mother said, disposed to sleep. Left directions to take the chloral during the night, if circumstances required it. 17th, saw her at 7 A. M., pulse 125; no pain; had refused all drink, refused the medicine, and had taken but the one dose of the chloral before mentioned. The sterno mastoid muscle of the left side stood out prominently, and the posterior muscles of the neck were hard and tense. Sent for Dr. Willard Parker, with directions, if he thought proper, to bring down Dr. Hammond or Dr. Seguin. At 12 o'clock, Dr. Parker, Jr., came down. She was then about the same; sitting up in bed answering questions promptly, with bright intelligence. Pupils much dilated, refusing to drink, and had taken no nourishment since the lunch of yesterday. Dr. Parker observed the rigidity of sterno cleido and muscles of neck; thought the dilatation of pupils remarkable, but otherwise saw no unusual symptoms. Four P. M., pupils widely dilated, has now some difficulty of inspiration, frequent sighing, shuddering when approached, complaining of noises down stairs, looks affrighted when any one approaches the bed. Absolutely refuses nourishment and drink, has persistently refused to let a spoon approach her mouth. At the strong solicitation of Professor E*****, her uncle, I attempted to give her chloroform, with a view of giving an hypodermic injection of morphine, but the attempt threw her into such a violent state of excitement when the handkerchief approached her face, that it required all the strength her mother could exert to keep her in bed. She was soon in the most violent and maniacal excitement, that we left her alone in the hope that her mother might be able to calm her. She begged to have the door locked, and that her uncle and I should not be allowed to come in again. At 7 P. M., returned to stay all night, found that her mother had been alone with her since I left; she reported her as being more quiet. But an hour had scarcely elapsed before I became convinced that her mother had been mistaken as to her condition; she was in fact having spasms every half hour, and in the interval lay in a

state of low muttering delirium. At 8 P. M., her mother consented that Prof. E***** and myself should take charge of her for the night. I found her completely delirious, did not recognise any one, and having convulsions every ten minutes, opisthotonos and tossing the legs about, throwing herself over upon her stomach, and attempting to get upon her elbows and knees. I gave her an injection of 10 m. Majendie's solution, in the thigh; she was entirely unconscious of the introduction of the syringe. In 20 minutes I gave her another injection; she soon became more quiet. The spasms had evidently been controlled by the injections, opisthotonos had ceased, but she was constantly spitting frothy tenacious mucus, and uttering short cries, very similar to the bark of a dog. All the spasms she had now were sudden jerks, in which she threw herself over upon her face, in which her mouth came in contact with my hand, a movement which might readily be mistaken by the laity as an attempt to bite. In the course of two hours she had received 60 drops of Majendie's solution. At 2 A. M., she became quite conscious, had no more spasms, talked incessantly, asked for the injections, said they made her "feel warm all over." They were repeated at longer intervals, and three times brandy was substituted for the morphine. She now asked for her medicine and drinks, but when presented begged us to wait; she evidently wished to exert all her resolution to take them, but could not be induced to make the effort. Vomiting of black tenacious mucus now took place, which continued till her death at 6 A. M. For an hour previous to death she was entirely free from spasms, with muscles relaxed, body bathed in a cold sweat, and entirely unconscious.

I have described the symptoms of this interesting case in connection with those of traumatic tetanus, for the purpose of showing the marked difference between the two diseases. The old and recently renewed theory which regards the existence of hydrophobia as merely a myth, or at most but another form of tetanus, can have but little to support it in view of such cases as the one here described.

