the hospital. The wound was then looking healthy, and discharging pretty freely. He was kept quiet in bed; and good diet was given, he being very weak from loss of blood.

On the 15th (three days after admission) he complained of a feeling of stiffness and soreness about the throat and neck, and on the following morning he was unable to open his mouth more than a quarter of an inch; this was attended with no spasm or pain, and he was able to swallow liquids without difficulty. He continued in this quiet state throughout the day; towards evening, however, the muscles of the face became rigid, producing the peculiar expression of countenance so characteristic of the disease. During the night, spasm of the muscles of the back and abdomen occurred, the attacks being frequent, but of short duration. At these times he perspired very freely, and the pulse was much more frequent and full.

On the morning of the 18th his general appearance was much worse, the spasms being more general and severe. About noon, the respiratory muscles also became affected, especially after attempting to swallow, the act of which was accompanied by great difficulty. He died at four o'clock P.M. (fifty-six hours after the commencement of the attack.) The spasms which affected the respiratory muscles during this last attack were most severe, and the whole muscular system was more or less involved. During the whole course of the disease there was no impairment of intellect. All attempts to bring about reanimation proved unsuccessful.

At the outset of the attack a purge was given, and aconite, in frequent and increasing doses, was also exhibited. Through the kindness of Dr. Harley, some woorara poison (the extract) was procured, which was injected subcutaneously on several occasions; an enema of beef-tea, brandy, and quinine, was given every four hours. Cold to the spine was also tried. No post-mortem examination of the body was made.

SCIRRHUS OF THE BREAST; REMOVAL; DEATH FROM
TETANUS OCCURRING SEVEN DAYS AFTER
OPERATION.

(Under the care of Mr. FERGUSSON.)

ISABELLA C—, aged fifty-one, married, was admitted on the 12th ultimo, with scirrhus of the right breast, the presence of which she noticed about nine months ago. The progress of the disease was slow, and accompanied by the ordinary symptoms. On admission, her general health was good, and there was a tumour of the right breast, about the size of a small orange; it was very hard, and involved the nipple. On July 14th, the patient being under the influence of chloroform, Mr. Fergusson excised the tumour. The disease had extended into the substance of the great pectoral muscle; a portion of which was consequently removed. The tumour was scirrhus; and, on making a section of it, several small cysts were discovered. On the following day the patient was very feverish, and complained of a great deal of pain and stiffness in the neighbourhood of the breast. Suppuration was not yet established. In a few days, however, these symptoms had all subsided, and there was a purulent, though not very free, discharge from the wound. She continued to do well until the 21st of July, when she complained of stiffness and some pain in the neck and jaws, and the face became swollen and red. The countenance soon wore a peculiar expression; and by the evening of this day, the muscles of mastication became rigid, so that she could only separate the jaws about half an inch. There was no difficulty in swallowing. The wound looked well, but the discharge was bloody and scanty. The patient had some good sleep during the night; but in the morning, after swallowing some liquid, she was seized with violent spasm of the muscles of respiration, and was for a time asphyxiated. In a short time the spasm subsided, and the patient recovered from its effects, remaining quiet for the rest of the day, the trismus, however, being more complete. About nine o'clock P.M., another attack, similar to the last, came on; and, during the night, several others of less severity occurred. She died at seven A.M. July 23rd, after an attack similar, but much more severe, than the preceding. Duration of tetanus forty-eight hours.

In this case, the muscles of mastication and respiration were the only ones affected, until a few minutes before death, when, in addition to these, those of the back and abdomen were violently contracted. The patient was perfectly sensible to the last. At the commencement of the disease a good dose of castor oil was administered, which acted freely. The extract of conium was then given, in three-grain doses, every two hours, the dose being gradually increased to six or seven grains. An enema (containing brandy, ten grains of quinine, and beef-tea) was given three times a day.

A post-mortem examination of the body was made, but with very unsatisfactory results. The muscles were rigid, and there was some slight vascularity of the cauda equina. The remaining portion of the cerebro-spinal axis was perfectly natural in appearance.

ST. BARTHOLOMEW'S HOSPITAL.

REDUCTION OF COMPOUND DISLOCATION OF THE ANKLE-
JOINT; DEATH FROM TETANUS ON THE EIGHTH
DAY AFTER.

(Under the care of Mr. STANLEY.)

THE notes of this case were taken by Mr. Rogers, house-surgeon to the hospital.

William M—, aged fifty-four, a man of quiet habits, and apparently of good constitution, was admitted on the 3rd of June, having sustained compound dislocation of the ankle-joint, with fracture of the fibula. The accident was the result of a blow from the shaft of a cart, and occurred ten miles away in the country. The dislocation was reduced by a surgeon, and the limb placed in splints. He was then sent to St. Bartholomew's Hospital. On examination, the bones were found in good position. A back splint was applied, with a foot-board, and the whole secured by rollers. For some time he progressed most satisfactorily, but on the 6th a good deal of inflammatory swelling was noticed about the cellular tissue of the limb, and suppuration subsequently set in. On the 7th, it was observed that there was a great deal of cellular inflammation on the outer aspect of the thigh, and the veins of the limb were hard and tender to the touch. There was not, however, at this time any great constitutional disturbance. His tongue was clean; his pulse 84, and of moderate volume; his appetite, however, had failed somewhat. The propriety of amputation was now considered, but it was decided that an attempt should be made to relieve the patient by free incisions, which were made above the ankle. The parts were so gorged that a considerable quantity of blood (about a pint) flowed from the openings. Great relief to the symptoms resulted from this proceeding. The leg was slung as in a common fracture, and water-dressing applied to the wound. Brandy was given, and an anodyne draught at bed-time. The inflammation of the cellular tissue abated, and the veins of the limb became somewhat smaller. He continued to improve until the 8th, when, on going round in the evening, Mr. Rogers found that the patient complained of some stiffness about the jaws. There was some difficulty in opening the mouth, though the tongue could be protruded. The sterno-mastoid muscle on the right side was somewhat tense; that on the left was lax. There was no difficulty in swallowing, no spasms, and no tension of the abdominal walls. Aperients were given, and a larger dose of opium at bedtime. These symptoms, however, came on next day with great violence, assumed the characters of decided tetanus, and were attended with much distress. They increased in intensity, and on the 10th he died in a fit of spasm.

Autopsy.—The leg only was examined. There was a good deal of suppuration amongst the muscles. A large quantity of pus was found in the joint. The internal lateral ligament was lacerated. There was no fracture of the internal malleolus. The astragalus was uninjured, except that a small piece had been knocked off. The cartilaginous surface was unimpaired. The articulating surface of the tibia was also entire. The periosteum of the lower part of the shaft of the bone was in part detached, and was in other places readily peeled off. The fibula was fractured obliquely, about three inches above the malleolus. The periosteum was readily detached.

MIDDLESEX HOSPITAL.

ACUTE TRAUMATIC TETANUS FROM WOUND OF THE FOOT;
RECOVERY UNDER THE USE OF TINCTURE OF ACONITE.

(Under the care of Mr. DE MORGAN.)

Of all the vegetable preparations, aconite is known to be one of the most powerful in its action upon the spinal nervous system; hence its value in tetanus ought not to be inferior to the many other anodyne remedies which are occasionally employed. In the pages of this journal (vol. i., 1846, p. 484) we have recorded an instance, under the care of Mr. Page, at the Cumber-

land Infirmary, Carlisle, in which a recovery took place under the use of Fleming's tincture of aconite. Another example also appears (*ibid*, p. 494) from Mr. Newton, of Newcastle, treated by the same remedy, which proved unavailing, for death ensued. We now give another, in which life was saved by the administration of aconite; but whilst we feel disposed to give due credit to the influence of the drug upon the disease, we can hardly attribute the entire cure to it, when the period at which its employment was commenced is remembered, for the tetanic symptoms had been existing twelve days before it was had recourse to.

We recollect a case of acute traumatic tetanus at Guy's Hospital in the summer of 1858, under the care of Mr. Cock and Dr. Wilks, treated by as many as 110 doses of *cannabis indica*; but the cure was attributed more to the quantity of wine and beef-tea taken than to the medicine. In Mr. Fergusson's second case, reported to-day, aconite was found ineffectual, and woorara was substituted for it, with, however, no better result.

The patient in the present case, a lad aged fifteen years, had always enjoyed good health. On the 30th of August, 1858, while wearing thin boots, he trod on a rusty nail, which pierced the ball of his foot. He withdrew it directly; the wound bled but little, and healed in a few days. On Sept. 6th the boy felt stiffness about the neck and lower jaw, which increased daily, and on the 12th he was unable to open his mouth, and could not walk owing to the stiffness of his back. He was admitted into the hospital on the 16th. There was then well-marked rigidity of the muscles of the neck and jaws, and the risus sardonicus was characteristic. He was unable to turn his head or separate his jaws; abdominal muscles very tense; complains of much pain in the neck and back; has not slept for two or three nights; bowels open; perspiring; pulse 80, moderately full. A hard cicatrix in the sole of the foot was excised. He was at first put upon strychnine, one-tenth of a grain, every two hours; carefully watched; soon diminished to one-twentieth of a grain, but the symptoms continued to increase. Twitchings began in the thighs, and great difficulty of respiration, and finally severe general spasms, with well-marked opisthotonos.

On the 20th, the plan of treatment was changed, and tincture of aconite was given, at first five minims every two hours, then eight minims. This was continued till the 27th. The dose was then administered every four hours, and on the 28th every six hours, and on the 6th of October it was left off altogether. The diet was throughout the most nourishing that could be taken—strong beef-tea, brandy, &c., and the bowels were kept open by turpentine injections. From the time the aconite began to take effect an improvement took place in the severity of the symptoms, and he has been steadily and gradually progressing, though very slowly. First the general spasms and opisthotonos ceased, then the convulsive twitchings of the extremities; these lasted till about the 1st of October, at which date he could sit up for his meals, could separate his teeth about half an inch; ate and slept well; face almost regained its natural expression.

Has been slowly convalescing since then. Can now (October 22nd) walk about, and appears in good health and spirits; only still feels a little stiffness about the muscles of the back, and cannot yet quite separate the jaws as wide as natural.

He was discharged from the hospital well on November 2nd.

LONDON HOSPITAL.

ACUTE IDIOPATHIC TETANUS, TERMINATING FATALLY IN SIXTY-EIGHT HOURS.

(Under the care of Mr. CURLING.)

THE idiopathic form of tetanus is rarely seen in this country. We, however, append an instance of it, which Mr. Curling considered to be undoubted, and a more severely-acute example he had never before witnessed in a female. The history of the case shows the occurrence of a fracture of the ulna some three months before. The interval was thought by Mr. Curling to be too long to permit of its being deemed the exciting cause, and no evidence whatever was manifest to show that the case was any other than an example of the idiopathic form. Death occurred in sixty-eight hours. It may be observed, that severely-acute cases of idiopathic tetanus terminate more rapidly than this in hot climates; but, generally speaking, the idiopathic form is much less fatal than the traumatic, because it is milder. Of forty-six cases of the latter mentioned

in Mr. Curling's "Treatise on Tetanus," occurring in hot climates, as many as ten actually recovered. We have availed ourselves of the notes of Mr. D. W. Bush, one of the hospital dressers.

Mrs. P—, aged forty-one, was admitted on the 12th of January last. She stated that she had been accustomed to work hard at washing, and attributed her present illness to overwork and exposure to cold and damp. She said that she had not received any external injury during the last three months (at which date she was admitted into the hospital with fracture of the ulna). The husband stated that in her youth she had a fall from a swing and injured her spine, and that ever since that time, whenever she caught cold, she complained of great pain in the back. The present attack commenced at five o'clock on the evening of Jan. 11th, up to which time she was in good health, with the exception of a cold. The first symptom (which came on suddenly) was inability to swallow, the attempt causing spasm of the constrictors, and also of the muscles of the face, the mouth being drawn up on one side. She went to bed, and obtained a little sleep, but was disturbed by the spasm, and in the morning came to the hospital. When admitted (at twelve o'clock), she complained of stiffness of the neck, with difficulty in deglutition, and pain in the region of the diaphragm. The abdominal muscles were not particularly tense, but those of the neck were. The jaw was closed, but able to be opened about a quarter of an inch. She could answer the questions put to her. There was more or less opisthotonos, and the knees were drawn up during the continuance of the spasm. Pulse 108, weak.

Mr. Curling saw her at two P.M., and prescribed milk and beef-tea, eight ounces of wine (if able to swallow, *ad libitum*), a pint of porter, and a draught containing twenty minims of chloric ether, and a like quantity of laudanum and sal volatile, to be taken every three hours; injections of beef-tea and wine were also to be resorted to if the patient became worse. She was placed under chloroform, during the influence of which the pulse fell to 80, and the respirations were 53 in the minute. The jaw could be opened an inch, and she was made to swallow a little wine. No good effect appeared to follow these proceedings. During the evening she was in great pain, and shrieked continually; but she continued to take the medicine, &c., up to four A.M., when she had a severe spasm, after which she became insensible, and passed her urine unconsciously. At six the spasm again occurred, but with greater severity, lasting about two minutes, during which the nurse thought she would have died. At eight she had another, but less severe. After this time they returned at different intervals, coming on spontaneously, and also immediately the introduction of any fluid into the mouth was attempted. During the spasm, the expression of the countenance underwent a great many changes; the eyelids at the commencement were closed, but open towards the termination; eyes slightly divergent; pupils dilated; great lividity of the face, and frothing at the mouth; the legs straight, and the feet everted; respirations 56 in the minute; pulse about 120, and weak; jaws firmly closed. At eleven: "Has been gradually getting worse. She has been for some hours unable to swallow, but the injections have been regularly continued every three hours." At twelve: "Gave chloroform, and while under its influence she swallowed several spoonfuls of wine. The influence was kept up about fifteen minutes, and as soon as it passed off, the introduction of fluid into the mouth brought on a spasm." At length, about forty-five minutes after twelve, a more severe spasm came on, and the pulse suddenly stopped (although she breathed five or six times after). Her death was apparently due to spasm of the heart, respiratory movement having been observed after the cessation of the pulse at the wrist.

At the post-mortem examination, which was carefully performed by Dr. Andrew Clark, nothing particular was found, with the exception of a small quantity of fluid which was present in the lateral ventricles, and marks of incipient pneumonia in one lung.

PUMPKIN-SEEDS IN *TENIA SOLIUM*.—Koussou and the ethereal tincture of male fern are certainly very efficacious in effecting the expulsion of the *tænia*; but practitioners should note the results obtained in Algeria by M. Tarneau, a military surgeon. Free ten drachms of pumpkin-seeds from their husks, pound them in a mortar with a sufficiency of sugar, and add to the paste thus obtained a cup of milk. The patient should be put on very low diet, and be given a small dose of castor oil; on the next morning the pumpkin electuary must be taken at an early hour, and from twelve drachms to one ounce of castor oil two hours afterwards.