of the motor function of the spinal cord, but they may well be uræmic in character; the delirium and headache in this case certainly bear this interpretation.

As regards treatment of this case, in point of fact, it was the immediate administration of the vinegar and the milk, and the local application to the burnt parts, by the physician who sent him to the hospital, that was of the greatest service to the patient. There is always great risk of the rapid development of œdema of the glottis in these cases, where a powerful irritant has been swallowed, and the resident very properly prepared everything for the prompt performance of tracheotomy, which fortunately was not rendered necessary by increase of the swelling. The importance of examination of the urine, in these cases of ammonia-poisoning, was well illustrated in this case. The condition was met here by the administration of digitalis, a milk-diet and an occasional laxative. The recognition, early in the course of the case, of the disease of the kidneys, and the prompt resort to appropriate treatment, might serve to avert lesions which would perhaps be of more danger than the primary effects of the ammonia, in the mouth, throat and surrounding parts.

The urine, in this case was found to be slightly alkaline, which was probably due to the presence of blood in the urine, or to the increased alkalinity of the blood from the absorption of the ammonia. It has been stated that, in some cases of ammonia-poisoning, the urine has been found to be acid; and this has been attributed to oxidation, by which the ammonia is converted in the blood into nitric acid. We have no evidence here that any such change took place.

In conclusion, I will remark that it is always of importance in cases of ammonia-poisoning which may be attended by acute inflammation of the kidneys, to keep the urine well-diluted, by the administration of such bland liquids as the patient can swallow. The question of the amount of influence which the perturbation of the nervous system, incident upon the fright and the shock had in the production of the disease of the kidneys, we cannot at present solve. The nervous system certainly governs the functions of the kidneys, and undoubtedly congestion of these organs might have such a cause as has just been suggested, yet we are scarcely prepared to assume that the inflammation may be attributed to a nervous cause alone.

RECOVERY IN A DESPERATE CASE OF ACONITE POISONING.

BY G. H. TUTTLE, M.D., EAST CAMBRIDGE, MASS.

Two cases of aconite poisoning have occurred in Cambridge during one week recently. The first resulted fatally, the second recovered. In the first case five and one-half drachms of the tincture were ingested, in the second, seven and one-half drachms. Medical assistance was obtained within ten minutes in the first case, and not until forty-five minutes had elapsed in the second. The treatment used in the first instance I am unable to state, but of the second case I can speak as an eye-witness.

The victim of the second poisoning was a large and strong person of decidedly alcoholic habits; and at the time of the accident he was on the verge of *mania a potu*. The man had been in the habit of taking

bromide at such times and in this case he confused it with the aconite. The quantity of the official tincture taken was within ten drops of an ounce. The man, at the time, had been drinking, but his condition was not noticeable. The aconite was taken at 10.30 A. M. At 10.50 he complained of feeling sick; but no attention was paid to this on account of his known alcoholic habits. At 11.15 he first vomited, and from this time on he continued to have nausea and frequent ejections of small amounts of yellowish fluid. A little mustard water was given him by the family, but his resistance was so great that only a small amount entered his stomach and no effect was produced. At 11.30 two doctors arrived. They stayed an hour, and during that time injected three syringefuls of brandy with a little tincture of digitalis under the skin. Only once during the whole hour could the pulse be felt at the wrist. The priest was called and a fatal prognosis given to the family.

At the request of the doctor in charge of the case, I consented to stay with the man and continue the treatment of brandy and digitalis with any other additional means which should occur to me. All three doctors considered the man moribund. At this time — one hour and a half after the poisoning — the patient was lying upon his back on the floor. The face was flushed from repeated vomiting; the respiration very slow and noiseless, being barely recognizable. Muscular relaxation was great, the arms and legs, when raised, dropping helplessly. The pupils were insensible to light. The pulse at the wrist could not be detected. The arms and legs were quite cold as far as the trunk. No convulsions had occurred. The man was entirely unconscious.

I concluded that nothing but heroic measures would avail to save him. I injected as fast as possible three syringefuls of brandy, and twenty drops of digitalis under the skin. Twenty drops each of tincture of digitalis and nux vomica plus brandy and a little molasses were injected into the rectum. Mustard water was poured down the throat freely; and ether and ammonia given by the nose as fast as possible. Hot jugs and blankets were used to retain the body heat. In about twenty minutes the arms became warm as far as the elbows, and the pulse became perceptible at the wrist. Free vomiting had followed the exhibition of mustard water and this, too, seemed to rouse him somewhat. Ten drops more of digitalis and two syringefuls of brandy were now injected. The pulse strengthened somewhat, the man opened his eyes and spoke incoherently. In another half-hour he was able to roll over upon his side and vomit intelligently into a basin. Hypodermics of brandy and five-drop doses of digitalis were injected every twenty or thirty minutes. Later brandy and carbonate of ammonia were given by the mouth, not at first retained in the stomach, but finally kept down for twenty or thirty minutes.

As he recovered, he complained of his head feeling swollen and of pins and needles sticking into him everywhere, also of great numbness. In four hours' time — five and one-half hours from the time of ingestion — he seemed perfectly conscious and spoke intelligently to members of the family. About this time he complained of burning pain in the stomach and begged every minute or two for water. Mucilage of acacia with bismuth and soda was then given him and continued for several hours; also small pieces of ice and brandy by the stomach.

Seven hours after the poisoning the patient fell into a quiet sleep which lasted most of the night. Strict orders were given not to raise him from the recumbent position. Next morning he woke up weak and oblivious of almost everything which had passed on the previous day. Wherever an injection had been made sloughs came away. The sloughs, however, were superficial, except in one place where the fluid had penetrated the subcutaneous muscular tissue of the forearm which was much inflamed at the time of writing.

Three days after the poisoning, the patient, though still weak, was able to be about and to do light work.

Medical Progress.

RECENT PROGRESS IN ORTHOPEDIC SURGERY.

BY E. H. BRADFORD, M.D., AND E. G. BRACKETT, M.D.

THE TREATMENT OF SPASMODIC TORTICOLLIS BY RESECTION OF THE SPINAL NERVE.

IN an exhaustive article on this subject, in the *Revue d'Orthopedie*, July 1, 1891, the writer cites the following result of cases which he had collected: Out of 24 cases there were 11 with cure; there was considerable improvement in seven; there was slight improvement in two; a temporary improvement in three; one death from flagrant erysipelas. The conclusions which he draws are as follows: that in spasmodic torticollis, where all other methods have failed, the resection of the spinal nerve is justifiable. This operation is easy to do, is not dangerous, and can in a majority of cases produce excellent results (that is, in 18 out of 24). The procedure which is the preferable one is that which consists in making an incision along the anterior border of the sterno-mastoid, starting from the summit of the mastoid process. The cure is rarely immediate, but there remain for some time spasmodic movements produced, not by the contraction of the sternal mastoid and the trapezius, which are paralyzed, but by the other muscles. These secondary movements diminish gradually and finally disappear, either in whole or in part; in a small number of cases they persist. If the movements persist, one can have recourse to resection of the branch of the fascia or of the posterior branch of the cervical nerve, after the procedure of Keen. After the operation it is necessary, to complete the cure, to employ massage for the muscles already contracted, or the wearing of an apparatus, which should be worn several months or longer.

ON THE OPERATION AND PATHOLOGY FOR CONGENITAL WRY-NECK.¹

The author's investigations are based upon three cases of congenital wry-neck operated on by open incision by Volkmann in 1880. During the operation he was able to demonstrate a point of fibrous degeneration of the muscles. A little portion of the muscle at the point where degeneration existed was excised, and histologically one could demonstrate that the muscular fasciae were diminished in number and atrophied. The name of muscular callosities, or fibrous myositis, described the condition. The author mentions that the section by open incision was already done by Roonhuysen in 1670. The subcutaneous section has

the advantage in cosmetic results; open incision has the advantage of greater thoroughness. Volkmann made the incision a longitudinal one; and in this way the degenerated muscle can be removed, which the author thinks is less readily done by transverse incision.

The following directions are advised by Keen, of Philadelphia, for the division of the cervical nerves:

A transverse incision is made half-way below the tip of the lobule of the ear, extending from the median line of the neck backwards, or even forcing slightly the median line. This incision should be two and a half to three inches long. The trapezius should be divided transversely, and the occipital nerve can be found as it diverges from the complexus and enters the trapezius. The nerve emerges from the complexus at a point situated in this aponeurosis and the median line, ordinarily half an inch above the incision — sometimes higher — and then enters into the trapezius, and can easily be found. The complexus muscle should be divided transversely at the level of the nerve, and the second cervical nerve if found. The inferior oblique muscles can be recognized, following the sub-occipital nerve towards the spinal column. The sub-occipital triangle can be recognized, formed by the two oblique muscles and the large posterior muscle of the neck. In this triangle the sub-occipital is found. The nerve should always be tied with a large catgut.

CONGENITAL WRY-NECK.²

The writer believes that Stromeyer's explanation of the origin of congenital wry-neck is a faulty one. As is well known, Stromeyer believed that the deformity was caused by a rupture of the sterno-cleido mastoid at birth. Petersen thinks that there is no clinical or pathological proof to justify this belief; and he has endeavored to sustain his views by experiments upon animals. He thinks that the deformity is due entirely to uterine pressure, and that the nurse or attending physician is in no way responsible for the existence of the deformity. The view of Stromeyer is supported by Colombana, and by Maas, as well as by Billroth, but the writer claims that they have not sufficient proof to justify such an opinion. He claims that there is no single recorded case of a rupture of the sterno-cleido mastoid in medical literature causing the deformity.

SYPHILITIC DISEASE OF JOINTS.³

Mr. Anthony Bowley reports six cases in which the joints became affected in syphilitic patients, and in whom the joint affection was probably specific. In one fatal case, gummata was found (two on the synovial membrane), while the lower part of the femur was roughened, and the periosteum thickened and loose. Five of the cases yielded quickly to the specific treatment; the sixth died. One of the cases presented a synovitis resembling rheumatic or traumatic; two were periostitis of the articular ends of the long bones; two were examples of gummata of the synovial membrane; and in one the joint was involved secondarily to a gumma in the muscles, and resulted from the extension of the primary lesion.

STATISTICS OF DEFORMITY.⁴

The writer has collected the following statistics: Out of 67,919 patients, 1,444 were afflicted with some

¹ Peterson: *Zeitschrift für Orthopedic Surgery*, i, 1, p. 112.

² St. Bartholomew's Hospital Reports, 1890, vol. xxvi, p. 83.

³ Hoffa: *Munich Medical Wochenschrift*, 1890, No. 23.

⁴ Villert: *Centralblatt für Chirurgie*, September 20, 1890, No. 38.