incision was made in the middle line, about four inches in length; and the abdominal walls, which were thin, were easily cut through. On opening the peritoneum, a thin walled cyst was seen covered in all directions with large veins; the hand, passed in, met with no adhesions in front or at the sides, but at the upper part something was recognised as holding the cyst. The cyst was tapped, and about sixteen pints of fluid, with the characters above described, flowed away; as it did so, the cyst was drawn out and was found to have no pelvic attachment and to be unconnected with the ovaries or the broad ligaments; the uterus and the ovaries were found in a natural condition. The cyst was firmly attached to the side of the spine and the left lumbar region; the spleen and the kidney on the left side were recognised as distinct from it, and on drawing up the cyst, its attachment was seen to be closely surrounded by coils of small intestine, which were firmly adherent to it. Seeing it would be impossible to free the cyst from its insertion, an attempt was made to enucleate it by stripping off its peritoneal covering; but this procedure was abandoned, as so many vessels were torn through and the hæmorrhage was free. It was then decided to fasten the cyst to the abdominal wall, cutting away as much as was possible; the circumference of the cyst was tied by six ligatures, and then the cyst was stitched to the abdominal walls by silkworm gut sutures, and a drainage-tube of India-rubber put into the cavity of the cyst; the peritoneum was sponged out and the abdominal wound closed and dressed with antiseptic gauze. The operation was performed under the carbolic spray.

The patient did well for the first twenty-four hours, and then the temperature rose on the evening of the second day to 101.2° and the pulse to 104. On the morning of the third day the dressings were found stained with blood, and there was seen to be a slight oozing from the cyst wall. The pulse and temperature kept up, and the patient began to show signs of septicæmia (with some internal hæmorrhage, this continued), and she rapidly sank and died on the sixth day after the operation.

At the *post mortem* examination, the part of the cyst left was empty and much contracted; the abdominal walls, at its attachment, drawn inwards and inverted; it was firmly attached to the side of the spine and the left lumbar region by a broad attachment, and its insertion was closely surrounded by coils of small intestine, which were intimately adherent to it. On the left side of the cyst the peritoneal coat had been stripped off by an extravasation of blood from a large opened vein, forming a sac about three inches by four, full of semicoagulated blood, and, without doubt, one of the large veins covering the cyst had been pierced by the needle carrying the suture, which fastened the cyst to the abdominal wall; and as the blood flowed, more and more of the vessels were ruptured, and the peritoneal coat torn back. There was also found some slight peritonitis. The uterus and ovaries were quite natural; all the other organs were healthy, but very bloodless.

CASE OF RUPTURE OF FEMALE BLADDER ASSOCIATED WITH ABORTION.

By T. LAWRIE GENTLES, L.F.P.S.G., Derby.

ON October 13th, I was requested, at 3 A.M., to visit a woman in a neighbouring street, who was said by the messenger (her husband) "to have had a mishap".

On reaching the house, I found a well made woman of 36 lying on her left side, in bed, vomiting large quantities of a dark brown pungent-smelling liquid. The pillows were drenched with the fluid; so also was the carpet in front of the bed; and on the walls opposite to the patient were stains of a similar nature. There was also half a pint of vomit in the chamber-vessel. The woman was in a state of collapse; a cold clammy perspiration stood on her face; her hands and feet were like ice; and her pulse was imperceptible. There was no one in the house except the husband and two little children, the latter occupying the same bed as the patient; while, to add still more to the ghastliness of the scene, the younger of the children (a babe of nine months) was vainly endeavouring to reach its dying mother's breast in order to obtain its usual nourishment.

I made a rapid examination by the vagina, but found a closed os uteri, and no marked traces of hæmorrhage. I observed, however, that the abdomen was greatly distended. I tried to administer some ammonia, but the patient was unable to swallow; she gave one agonising look of dread, moved her lips as if to speak, and then died, the death taking place within a quarter of an hour after my arrival at the house.

My first impression was that the woman had died of internal hæmorrhage; the only things which seemed to militate against this being the redness of the lips and the copious vomiting. This idea of hæmorrhage seemed also confirmed by what the husband said at the bedside—viz., that "his wife had had a good many clots come from her, and that her linen was very much stained".

I refused, of course, to give any certificate, and communicated with the coroner. In collecting evidence for the inquest, the following facts were clearly brought out; first, that the woman was a drinker; secondly, that she had had a drinking bout for some days; and thirdly, that she had occasional difficulty in passing urine. In regard to the two first points, the husband's evidence was most conclusive, and showed clearly that when the poor woman had one of her drinking fits on, she would not only consume large quantities of beer (her favourite drink), but also all the spirituous liquors she could lay her hands on. In regard to the third point, the husband also made clear the fact that his wife had often suffered from retention of urine, but, "so far, had always got over it." At the inquest, further details of evidence brought to light the fact that the woman had complained of pain in her belly for two or three days previous to death. She had, however, been "up and downstairs" until 1 P.M. of the day preceding her death; but when her husband came home at 6 P.M., he found her in great pain, and was told by his wife that "she had been losing blood." A good many clots were in the chamber vessel, and these he threw away into the ash-pit. The pain getting no better, and finding that his wife was "altering for the worse," he came for a medical man as already stated.

The coroner having ordered a *post mortem* examination, I made one the same afternoon, and in this I was assisted by my brother and son.

There were no external signs of violence, except a slight abrasion on the forehead, another on the lower lip, and a small bruise on the inner side of the right thigh, none of which were of recent date. On cutting through the abdominal walls, the great depth of fat and its extreme "wateriness" arrested our attention, the knife going through the tissue with a distinct "swish". Suspecting an accumulation of fluid in the abdominal cavity, a small incision was made at first. No sooner was this done, than a reddish-brown liquid began to well up. Some of this was drawn off, and the opening enlarged, when nearly six pints of fluid were removed. The stomach and intestines having been carefully examined, were then taken out, in order to facilitate further search for the lesion. The first thing which we noticed was a pint of blood lying in the pelvic basin; and, on making more minute search, a rent was discovered in the posterior wall of the bladder—a rent large enough to admit four fingers. Here, then, was the cause of death. There were some fresh adhesions on each side of the bladder and the pelvic walls; there were also similar adhesions between the bladder and uterus. All these adhesions, however, were extremely soft, and broke with the slightest pressure. The walls of the bladder itself also seemed much thinner than usual. No flakes of lymph could be discovered in the fluid removed from the abdominal cavity, and neither did the peritoneum exhibit any great degree of vascularity. It may, however, be, I think, safely affirmed that a large portion of the fluid found was effused from an irritated peritoneum—the other portion of the fluid being, of course, urine from the ruptured bladder.

On opening the uterus, signs of recent delivery presented themselves; on observing which, I asked my son to tell the husband to rake up "the clots" from the ash-pit. The husband did so, and one of the "clots" was found to be a foetus, three inches in length.

Now come the questions: When did the rupture of the bladder occur? and, Had uterine action anything to do with it? Supposing that "the pains in the belly", of which the woman complained for two or three days before death, were the commencement of the abortion, it is reasonable to infer that, when true expulsive efforts on the part of the uterus began, these efforts would be aided by the action of the abdominal muscles; and, supposing still further, that the bladder was at that time distended to its fullest capacity, it is perfectly possible that the pressure of the abdominal muscles would be the "last straw" necessary to produce the fatal lesion. I am, therefore, inclined to think that the rupture took place in the afternoon of the 12th. I ought to have stated that, although, when the husband came home at 6 P.M. on that day, he found his wife in bed, she, nevertheless, "kept getting out of bed, trying to pass urine, but could not." There can be but little doubt, that the alcoholic condition of the patient would rob her of her sense of attending to the calls of nature; and it is melancholy to think that, if she had only been seen earlier, a simple catheterism might have saved her.

As a piece of concurrent evidence of the habits of the patient, it

may be stated that the liver was a genuine "nutmeg"; that the kidneys were thoroughly disorganised (the cortical substance being barely distinguishable); and that the spleen was exceedingly soft. The heart was small and fatty. The lungs were fairly healthy, but there were extensive adhesions in the right pleural cavity. The head was not examined.

THE ACTUAL CAUTERY IN THE TREATMENT OF CORNEAL ULCERATION, &c.

By SIMEON SNELL, M.R.C.S.Eng.,

Ophthalmic Surgeon to the Sheffield General Infirmary and to the School for the Blind.

ALTHOUGH for some time used by various ophthalmic surgeons on the continent, the actual cautery in the treatment of corneal ulcers does not seem to have been much adopted in England; hence I need, I think, no excuse for recording this brief note.

As to its value, there can, I imagine, be little doubt. In hypopyon ulcer, it in many cases replaces the "Saemisch incision," which has done much for this destructive class of affections, and yields frequently very capital results. Three such cases are at present under my observation. In each the ulcer, directly after the cauterisation, has assumed a healthy appearance, commenced to heal, and the pus in the anterior chamber has disappeared. In an example also of the uncommon condition, bullous keratitis, and which I propose to record hereafter more in detail, the use of the actual cautery yielded excellent results. A case just now of marginal pustule, which seemed disposed to perforate, healed quickly after a slight touch with the cautery. Other cases will suggest themselves for its use, but I have touched upon sufficient for the brief limit I have set to this note.

The application of the cautery is not so painful as first impressions would lead one to fancy, and practically little complaint is made of its employment. It does not necessitate the administration of an anæsthetic. The cauterisation has in some instances to be repeated, and I need hardly add, its application is superficial. By some an iron bulb cautery has been used, and, indeed, I have, in some cases, employed one. Platinum presents, I fancy, however, advantages. It does not readily oxidise and discolour, nor do the organic particles tend to corrode it. Messrs. Pickard and Curry, of Great Portland Street, have made for me a little cautery, which answers well, I think, the purpose for which we require it. It is depicted in the woodcut. The bulb is of platinum, and is about two millimetres in diameter. It is readily heated in the flame of a spirit lamp. Of course a cautery could be employed attached to a battery, or with I suppose the thermo-cautery, but for ocular purposes the advantages would seem doubtful.

TROUBLESOME FREQUENCY OF MICTURITION.

By W. E. STEAVENSON, M.B. Cantab.,

Electrician to St. Bartholomew's Hospital.

THE question of troublesome frequency of micturition has lately been the subject of many questions and suggestions in the BRITISH MEDICAL JOURNAL, chiefly with regard to its treatment. This condition exists in others besides hysterical women; many cases have been quoted of children of various ages, and men; with no other urinary trouble, stone, diabetes, or any other recognised or ascertainable cause, who are constantly troubled by the necessity of frequently passing urine. If this desire is not satisfied, it results in an uncomfortable wetting of the clothes. Many of these cases in young children can be cured by proper training, and are only the result of a careless and dirty habit. Again, they may be caused by a long and irritated foreskin, or by reflex action due to worms; sometimes by the presence of oxalic acid in the urine. In the somewhat numerous cases which came under my observation when resident at the Hospital for Sick Children, Great Ormond Street, it was found that they, as a rule, readily yielded to treatment when the cause was obvious, but were most intractable when no cause could be ascertained. We never tried the effect of electricity upon them; but many of the cases were due, I think, to an abnormal condition of the nervous supply of the bladder, or an increase of reflex excitability of the spinal cord. When we consider that the micturition centre is in the lumbar region of the cord, the stimulation of it by electricity seems to

be a rational mode of treatment, if in any way it does not perform its proper functions. On the continent, for some time past, and lately in this country, these cases of frequent micturition have been treated by electricity, with the most beneficial results. One electrode, in the form of a spinal disc, connected with the positive pole of the battery, has been applied to the lumbar region, and the other electrode above the pubes or to the perineum, and a weak current passed for a few minutes daily, followed by a relief of the symptoms, from the commencement of the treatment, and complete cure usually within a fortnight.

In the first case described in the JOURNAL, which has called forth these remarks, oxalate of lime was discovered in the urine. In the letter from "M.D.," who mentioned the case of an officer from India troubled in this way, reference is made to the effective treatment of these cases by a blister to the back of the neck. Probably, a blister so applied, acts somewhat in the same way as electricity, by its effect on the spinal cord, and, through it, on the micturition centre in the lumbar region. The known action of strychnine on the cord also, points out its use as a rational mode of treatment, as mentioned by "L.R.C.P." in the recent correspondence. But, of all remedies, the passage of a weak galvanic current from the lumbar region to the region of the bladder, or its neck, appears to be the most efficacious in those cases where no reason can be ascertained for this frequent desire to pass urine.

CLINICAL MEMORANDA.

THE TREATMENT OF INFANTILE PARALYSIS.

IN regard to the treatment of infantile paralysis, I cannot do otherwise than insist upon the fact that, the majority of cases derive no benefit from electro-therapeutics. It may be conceded that some few are benefited, and, against these, we may balance about an equal number which are injured.

There is but little advantage in suggesting new names for this disease—at least, in adopting such a substitute as Dr. Barlow proposes, for the term "regressive" has no pathological meaning. We all know what is meant by infantile paralysis, and the fact that it occurs in rare cases among adults, is no argument for its disuse.

The case which Dr. Barlow mentions would, in my opinion, have done just as well without electric treatment. The question of *quid mali* has to be examined and considered, as well as that of the *maximum bonum*, by those who attribute special benefits to electro-therapeutics.

ROBERT LEE, M.D.

THERAPEUTIC MEMORANDA.

GELSEMINUM IN TETANUS.

REFERRING to Dr. J. B. Read's paper as to the use of the liquid extract of *Gelsemium sempervirens* in the treatment of tetanus I would make the following remarks. During the session of 1873-74 I communicated to the Liverpool Medical Institution a paper on the physiological action of that drug, and as the result of many observations and experiments, came to the conclusion "that the principal effects produced by large doses are extreme muscular relaxation without either stupor or delirium. In these respects," continues the paper, which was published in April 1875, "its action seems somewhat akin to that of *Conium maculatum*, and these effects would seem to point to its probable utility in tetanus and other disorders attended with severe muscular spasms."

During the following session, Dr. Spratly of Rock Ferry, honorary surgeon to the Birkenhead Borough Hospital, communicated to the Liverpool Medical Institution a report of several (I think three) cases of traumatic tetanus, which he successfully treated by means of gelseminum in the manner indicated by Dr. Read, the doses of the drug being very large, and the effect in each case eminently satisfactory. One of these cases, which, by Dr. Spratly's courtesy, I had an opportunity of seeing was very severe.

WILLIAM CARTER, M.D.

Liverpool.

THE ACTION OF HYOSCYAMINE.

LATELY I had occasion to use hypodermic injections of this alkaloid in the case of a gentleman, aged 58, suffering from a second attack of acute mania. On a certain day I injected 1-40th of a grain (Merck's). The patient fell asleep in a few minutes, and slept quietly for four or five hours, but on awaking his condition was not much improved. An attempt was made to give the hyoscyamine in