Having, by one or other of these methods, prepared the way, we now come to the important part of the treatment, and that is the free application of nitric acid to the whole length of the cervical canal. At first, we should content ourselves with applying the acid carefully to the lower portion of the cervix, in order to find out whether it will tolerate the remedy.

Should no inconvenience arise, or after this has subsided, the application of the acid may be again resorted to. A Playfair's probe, with cotton-wool carefully wound round it, is saturated in the strong nitric acid and then passed for about an inch and a half up the cervical canal, any excess being neutralised by a saturated solution of carbonate of soda. A few applications of the acid, at about intervals of a week, generally succeed in improving the condition of the cervix very materially: the periods become more normal in character and duration, the thick glairy discharge lessens in quantity, and the other symptoms improve also. The general health must, of course, be attended to meanwhile, and it will be well to employ twice daily injections containing borax or other agents, and to persevere with the glycerine plugs.

A very frequently overlooked cause of abortion is allowing this condition of the cervix, previously described, to go on unchecked by treatment during the early months of utero-gestation, when the natural tendency is for the morbid condition to become exaggerated, owing to the increased determination of blood to the uterus. I have met with numerous instances where, I feel sure, this granular condition of the cervix has so intensified the rhythmical spontaneous contractions and relaxations of the uterus (which occur normally during pregnancy, as insisted on by Dr. Braxton Hicks) as to be the active cause of expulsion of the ovum.

Patients have presented themselves stating that they have a sense of constant dragging or bearing down when a few months advanced in pregnancy, as if labour were coming on. They not unfrequently add that they have already had several miscarriages, and that they fear another is coming on now.

On examination *per vaginam*, the cervix is found to be very full and fleshy, soft to the touch, and bathed with muco-purulent secretion, often of so acrid a nature as to cause severe excoriation of the labiæ and inner surface of the thighs. When seen through the speculum, the cervix is found to be the seat of intense granular degeneration. Under these circumstances, what is to be done? If we let the mischief run on without attempting to check it, the inevitable miscarriage occurs, and we are blamed for not having prevented it. If we attempt to remedy the evil, unless we proceed very cautiously, miscarriage not infrequently occurs, and again we are blamed for having induced what we were attempting to obviate.

Our duty is plain. We must endeavour to avert the catastrophe by cautious and judicious treatment. We have, in fact, everything to gain and nothing to lose; for, if miscarriage occur, it is in spite of, and not in consequence of, treatment. This should always be explained to the patient beforehand, and her sanction to the proposed treatment obtained. Having done this, the better plan is to confine her to bed for a few days, and, if necessary, bring her gently under the influence of opium, or give bromide of potassium or hyoscyamus until the uterine action is less marked; then pass a medium-sized Ferguson's speculum and get the cervix well in view. Should the granular condition be very extensive, it may be well to confine our applications to one or other lip at first, until we see whether the patient is tolerant of treatment.

The remedies I have found most serviceable and least likely to induce miscarriage have been carbolic acid, nitric acid, and nitrate of silver. One or other of these should be carefully but thoroughly applied, no excess being allowed to run down and irritate the vagina, or to follow the exit of the speculum and so excoriate the vulva. A tampon of cotton-wool saturated in oil should then be inserted, and the patient enjoined to keep the recumbent position.

I have never had to inject morphia hypodermically, and only very seldom had to employ a morphia suppository to allay pain; but, should it be requisite, one or other of these may be resorted to.

The application of the acid may be repeated within a week or so, depending upon the inconvenience produced and the advantage gained. A lotion, containing half an ounce of borax to the pint of water, may be used as an injection night and morning, care being taken not to employ much force in its administration, tepid water being used if the weather be cold.

THE directors of the Salop Infirmary, Shrewsbury, in their annual report, take occasion of the recent vacancy for a House-Surgeon to recommend that the appointment should in future be vested in the directors and the medical staff, instead of the whole body of trustees, as at present.

A CASE OF CONFIRMED EPILEPSY, WITH IRREGULAR AND PAINFUL MENSTRUATION, SUCCESSFULLY TREATED BY LECLANCHÉ'S CONTINUOUS CURRENT.

By A. S. MYRTLE, M.D., Harrogate.

IN April 1875, I saw for the first time Miss M. N., aged 20. She had a very healthy appearance, was of full habit, and showed a large measure of intellectual capacity; in fact, her appearance and manner would never have led one to suppose that for six years she had suffered from menstrual difficulties and epileptic seizures. She began with her periods when thirteen. For the first year, these were tolerably normal; after that, they occurred irregularly, and were accompanied by ovarian and lumbar pain, with well-marked and protracted fits. These sometimes came on a few days before the menses, but more frequently from two to three days after. Sometimes there would be one severe attack, invariably occurring in bed and while asleep, with general clonic spasm of the muscles, stertor, and unconsciousness, on cessation of convulsions; at other times, there would be a milder attack, occurring when sitting at table, and preceded by a sufficiently well marked "aura" to enable her to retire to her room; but after such an attack she remained clouded and unhappy, and invariably had one or two more of the same sort before she returned to her usual condition. Her temper became irritable, and occasionally she exhibited bursts of violent passion without provocation. She was living in a state of constant apprehension of an attack, and that alone made her unamiable. During the six years she had been under medical treatment, and had also undergone a course in a hydropathic establishment, and all to little purpose. Her condition was becoming worse and worse; her self-dependence less and less, so much so that she not only dreaded going to public places, but actually showed reluctance to mingle with her own family and friends.

When I first saw her, I gave her a sharp mercurial aperient, and followed that up by half-drachm doses of potassic bromide morning and evening. The aperient was given once a week, and the bromide continued regularly for eighteen months, with very good result as far as the epileptic seizures were concerned, but with no improvement as regards the catamenia.

In November 1876, a curious thing happened. Whenever she talked much, or danced, her mouth and throat became dry; her lips, tongue, and mucous membrane of the mouth became deep claret-coloured; and she could neither speak nor swallow unless she took fluid to moisten the parts. She still continued the treatment, and in January 1877 I had an opportunity of seeing her after some hours' dancing. Her appearance was most singular. Her lips, tongue, mucous membrane of mouth and throat, looked as if stained with a deep purple dye; the eyes were brilliant, and the pupils largely dilated; whilst the skin round the mouth and face generally was much paler than usual. She felt quite well; but, unless she moistened her mouth, she could not articulate distinctly, nor swallow. This continued as long as she kept dancing.

I attributed the local congestion to a temporary paresis of the vasomotor nerves of the parts affected, somehow caused by mental and physical excitement whilst the nervous system was under the influence of bromide of potassium. She could not afford to give the medicine up; and accordingly, after thinking how I might best remedy the congestion and discomfort arising therefrom, I determined to try the effect of *jaborandi* in combination with the bromide. I gave ten grains with each dose. The first dose was given at bedtime, and in two hours the flow of saliva was so active that she saturated several pocket-handkerchiefs. I reduced the dose, after the third day, to five grains; and since then she has never experienced any more discomfort in the mouth, and has had recourse to the *jaborandi* now and again as occasion required.

In 1877, she travelled on the Continent, and was capable of doing a fair amount of work. During all this time she continued to be irregular, suffered from severe pain, and had fits of more or less severity before or after each period. Once during the hottest season, whilst abroad, she was regular to her time, and for the first time in her life thoroughly "unwell". After this, she felt better than she ever remembered. On returning home, she fell back to her old ways and became more irregular than ever. I had recourse to periodic depletion (monthly) by leeching the thighs. This, I think, weakened, but did not improve her state. The fits were, I think, aggravated by the leeches.

In March, I proposed trying the effect of the continuous current of

Leclanché; and on April 20th I commenced with five cells. I passed the current from the lower spine through both ovaries and uterus for fifteen minutes each morning, and gradually increased the strength as she could bear it to twenty cells. She became unwell within a week of her expected day, and continued so for three days. There was no nerve-disturbance before or after the period. A few days after she was better, I again applied the current, giving up to thirty cells; and the flow made itself visible the very day on which it ought. In twelve hours, it ceased; so I again had recourse to the battery, and in two days all came right, and the discharge was greater than it ever had been, and continued for four days. She remained perfectly free of all epileptic symptoms, and her temper and health were better than ever. I allowed seven days to pass before applying the current; then I made use of it, going up to forty cells.

A week before the expected time, I made her sit daily for fifteen minutes in a hip-bath with a solution of hydrochlorate of ammonia, and passed the current through the water; and on the very day they ought the menses appeared, but again ceased for two days, to reappear and pass through their natural course as on the previous occasion. Again there was perfect freedom from all epileptic signs; so much so that on the second or third day she was out on horseback.

During the time I used the Leclanché, I never omitted the bromide, as her system seemed to have become so used to it that she could not or would not do without it. Of course, three months are not a sufficient test of the power of any remedy; still I think the result is so far satisfactory as to be worthy of record.

One fact I must mention, and that is, that under certain conditions the nerves seem almost insensible to the action of the current; at other times, they resent its mildest application. Another is, that, in giving a bath, care must be taken that the walls of the bath do not abstract the current from the water and the body of the patient; the best plan being to use a copper wire covered with India-rubber solution for the pole inserted into the water, and for the other any other electrode to be moved over the spine or any part of the trunk of the patient either by her own or attendant's hand. The application of this battery can be put in practice by any woman of common observing powers after a single demonstration. For medical purposes, I recommend a forty-cell battery, as it happens very often that the patient can bear that number of cells quite as well as ten or twenty.

I have just learned of the success of the same treatment in two cases—sisters—one aged 19, the other aged 17½. The elder has been irregular always, sometimes missing one or two periods. She has suffered from severe headaches, has had occasional faintings, and her spirits have been greatly depressed; and at intervals she has been unlike herself in disposition and conduct—in fact, epileptiform. She has had all sorts of emmenagogues given her without any result. I ordered her a Leclanché's battery of forty cells, explained to her mother how and when to use it, and she writes me to say that it "has answered perfectly and produced the desired result", not only in the case of the elder girl, but also in the case of the younger, who seemed perfectly healthy, but showed the same disposition to irregular and painful menstruation as her sister. Having only received the above intelligence to-day (August 5th), I regret I cannot furnish further particulars. In the case of the elder girl, I forgot to say that the "period" was not only irregular, but, when it did appear, gave much pain, and necessitated rest in bed for twenty-four hours.

INTESTINAL OBSTRUCTION TREATED BY BELLADONNA.

By GEORGE PARKER MAY, M.D., Maldon.

THE subjoined case presents features of interest as illustrating the therapeutic powers of belladonna as well as its toxic action.

A gentleman, seventy-five years of age, in vigorous health, fulfilling the duties of county coroner and those attached to other public appointments, was seized on the morning of August 31st with severe pain in the right iliac region. Mr. Tomlinson, his medical attendant, administered a pill of croton-oil, and subsequently a dose of castor-oil (the patient being exceedingly anxious to have his bowels relieved); this was followed by an injection of warm water. Sickness ensued, and no alvine relief was obtained. In the evening, I was summoned to meet Mr. Tomlinson in consultation. The patient complained of a dull pain, aggravated by pressure, over the head of the colon, extending downwards and towards the lumbar region. The pulse was 60 and full; the head and face flushed. Opium was prescribed, and a repetition of the enema, and turpentine fomentations, which somewhat relieved the pain. On September 1st, he had had much pain during

the night, recurring in violent paroxysms, mitigated by the opium, but returning when the anodyne effects had subsided. Injections, simple and medicated, had been freely administered with no beneficial result, but with the effect of increasing the pain. I advised the administration of a quarter of a grain of extract of belladonna every three hours during the night.—On September 2nd, only one pill had been taken. The pain and general symptoms were aggravated; the tenderness on pressure was greater. The abdomen was swollen and tympanitic. Temperature 102 degs.; pulse 95. He had nausea, but no vomiting. In the evening, there was increased rapidity of pulse, and general evidence of typhlitis. As the case presented a formidable aspect, it was determined to push on the belladonna treatment. Accordingly, he was ordered a pill with a grain and a half of extract of belladonna every two hours during the night.—On September 3rd, at 5 A.M., Mr. Tomlinson was summoned, as the patient was thought to be dying. It was stated by the attendants that the breathing had become stertorous, and that he was incapable of swallowing. Four pills (six grains of the extract) had been taken between 9 P.M. and 4 A.M. Mr. Tomlinson found him to be incoherent, and struggling to get out of bed. On our visit at 9 A.M., he was in the same condition, and delirious. The head and face were flushed, hot, and bedewed with profuse perspiration. The pupils were dilated to the boundary of the arcus senilis, which, in this case, was much developed. The tongue was dry, but no indication of thirst could be observed now, nor evident throughout his illness. The tempera ure could not be ascertained owing to the extreme restlessness of the patient and the jactitation of the arms. The pulse was rapid, feeble, and compressible. Brandy in small quantities, with milk and ammonia, was given, as it could be got down; and ice water was applied to the head. In the meantime, he had passed involuntarily in bed a copious fluid evacuation. At 1 P.M., he had made incessant efforts to get out of bed, which were with difficulty re-trained. Though far from rational, he was less incoherent; he knew his brother, and called him by name. The bowels had again been copiously relieved. At 8 P.M., he was much better; rational, but excitable and talkative. The pain in the body was nearly gone, and the tympanites much subsided. He had several evacuations, for which purpose he got out of bed of his own accord.—On the 4th, he was much better, having had four hours' quiet and continuous sleep. The pupils were much dilated. The tongue was coated with a moist brown fur. There was slight uneasiness in the head. From this period his convalescence proceeded uninterruptedly, and, in a fortnight, he was able to resume his ordinary avocations.

NOTES ON SEWER-GAS POISONING.

By HENRY G. TREND, L.R.C.P., etc.

DURING the last two years, several cases of illness, presenting various different symptoms, all traceable to the poisonous effects of sewer-gas, have come under my notice. An abstract of these in the order of attendance may not be without some interest.

In January 1877, I was called to see three children, seven, five, and three years old, living in a large new and apparently well-built house in one of the finest roads in the north of London. They were all vomiting and very feverish, the youngest especially ill, with a temperature of 103 and every appearance of oncoming scarlet fever. On the following day, there being no improvement, Dr. Sutton saw the children with me. He also suspected scarlet fever. No rash appearing, on further inquiries, I found that the father, mother, and two servants had for some time felt a nausea, with occasional diarrhoea and a general feeling of exhaustion. Although assured that the drains were "all right", I determined on seeing for myself, and speedily found the cause of the mischief. *The joints of the soil-pipe had been forgotten to be cemented, and the sink in the back kitchen was untrapped; consequently the whole atmosphere of the house was impregnated. The youngest child continued alarmingly ill for many weeks; a large abscess formed round the left elbow-joint, which, in February, Mr. Allingham saw with me. The child, however, after many months of suffering, made a capital recovery, and has perfect use of the joint.*

During the last month, I have been again attending this family with the same sort of symptoms, and found that, in the lavatory on the half-landing, an ingeniously (?) contrived zinc-lined tray for the use of the housemaid had been put, into which the waste water from the basin and the bath-room above ran, *communicating directly with the drain, but which was omitted to be trapped. This has been done, and the health of the inmates is now good.*

In September last, I was sent for to a house close to Hackney Downs, and found the whole family (ten in number) covered with an