The next most frequent cause is sudden or exhaustive hæmorrhage. In both these cases, the convulsion is probably the result of an anæmic condition of the brain.

In looking through the literature of uræmic eclampsia, we find most observers agreeing that an anæmic condition of the brain is the cause of the symptom, and that with this we have oedema of the brain-tissues; but they differ as to the manner in which this state of things is produced. Dr. Hughlings Jackson suggests "spasm of the cerebral arteries" as a cause of this anæmia; whilst Dr. George Johnson, supported by the ophthalmoscopic observations of Dr. Gowers, advances the theory of a "stopcock action of the arterioles."

Traube, some years since, said that the nervous symptoms of Bright's disease (convulsions amongst the rest) were caused indirectly by cerebral anæmia. His idea was that the impoverished state of the blood, and the coincident cardiac hypertrophy, led to the exudation of serum through the coats of the minute vessels; that the capillaries and veins were pressed upon by this effusion; and that this pressure diminished the circulation of blood through the vessels. In some interesting papers on this subject, written by Dr. Mahomed, he adopted an entirely new theory to account for the production of the convulsions, viz., "the rupture of minute blood-vessels within the substance of the brain." My own impression is that both anæmia and oedema exist, nor is it difficult to see how this combination may be produced. The lessened calibre of the arterioles, owing to their conveying improperly depurated blood, will account for the starved condition of the brain; while serous exudation into, and between the membranes of the brain, is simply an extension of that same condition of things which we find in other parts of the body, as exemplified by the oedematous condition of the extremities and of the face and eyelids. If an anæmic state of the brain is sufficient to account for the convulsion, may not this serous effusion be the cause of the profound coma which usually accompanies this condition? The rapid and favourable action of nitro-glycerine in this case appears to me to favour the above theory, and rather to militate against the hypothesis propounded by Dr. Mahomed; for, if the cause of the convulsion were rupture of minute blood-vessels into the substance of the brain, the removal of the tension of the blood-vessels would not be likely to cause an immediate return to the normal condition.

In reviewing the results of treatment both of puerperal and of uræmic eclampsia during the past few years, the fact immediately strikes one that the successful cases have been treated with such remedies as have the property of dilating the blood-vessels, and thus freeing the circulation through the brain. The principal of these have been chloral in large doses, chloroform, opium, occasionally but not often successful; vapour-baths or wet packs; Simpson's baths; sinapisms and warmth to the lower extremities, combined with cold applications to the head; free purgation, and also bleeding. Of these remedies, the first and last have, in all probability, been more successful than all the others together.

Ergotine, also, was mentioned by more than one speaker in a discussion upon puerperal convulsions; but it is difficult to see how this could have been of benefit, and when its use was called in question by other members, all that they claimed for it was that it was serviceable in rapidly expelling the contents of the uterus.

In the treatment of one class of this affection, viz., the convulsions produced by excessive hæmorrhage, I might be induced to use this remedy; first, as a means of checking such hæmorrhage; and, secondly, in the hope that, by contracting the arterioles, a larger supply of blood might, perhaps, reach the brain, though I do not feel sure that so happy a result would be effected. I believe more would be done for such a case by warm affusions to the head, and by placing the upper portion of the body in the dependent position, which has often proved serviceable in the anæmia of brain produced by an over-dose of chloroform.

It may be long before I have a second opportunity of testing the value of this remedy in another similar case; therefore I have thought it advisable to place this one on record, not because I think a single case which has proved successful sufficient to establish the value of a remedy, but in order that others may, if they think proper, adopt what appears a rational, reliable, and safe treatment which is not open to the objections and dangers of chloral, chloroform, etc.

Since writing the foregoing paper, the following case has occurred in my practice, and as it has a distinct bearing on my other case, I think it advisable briefly to record it.

On January 2nd, I was called to see Mrs. J. W., aged 63. Her friends gave me the following account of this patient. For some months previously she had seemed in better health than usual, but had complained of shortness of breath when walking, and of occasional attacks of giddiness. The day before I was sent for, not feeling well,

she had taken an aperient dose, which had freely operated. The patient lived alone, and was an early riser. On the morning of my visit her son had gone as usual, to call her; but, after knocking at the front door, he could hear no movement within. Later on, he heard a fumbling at the bolts, and on pushing open the door, found his mother insensible on the floor. She was carried to bed, and was in the same condition when seen by me about 10 a.m. She could be roused, but not sufficiently to reply to questions. She was able to put out her tongue, and pointed to her head as being in pain. The pupils of her eyes were contracted irregularly. The extremities were warm, and there was no paralysis, though the symptoms were those of compression, but from what cause I was unable to judge. The pulse was quick, small, irregular, and hardly countable, being over 180 per minute. Digitaline was given, which reduced the pulse to 160, but did not improve its regularity.

January 3rd. The patient was worse. Pulse still 160. The temperature was normal. She could not be roused. The bowels had not acted since the 1st instant. During the day I was able to procure some urine for examination; it was scanty, and contained two-thirds of albumen. I, therefore, considered the case was one of uræmic coma, and gave a very unfavourable prognosis. One-minim doses of solution of nitro-glycerine were administered every four hours, and nothing but skimmed milk given as food. Her friends wishing to have Dr. Coghill's opinion, he saw her with me the following morning, and confirmed my diagnosis. The heart being weak and irregular (though stronger than on the previous day), he recommended ten minims of tincture of belladonna and ten grains of iodide of potassium to be given every four hours, and the nitro-glycerine with every alternate dose. The bowels had acted twice since commencing the nitro-glycerine, but a powder of calomel was to be given at night if required. At my night visit I found it necessary to stop the mixture, on account of its having produced unpleasant physiological results. The powder was not given, as several free actions of the bowels had taken place. The nitro-glycerine was ordered to be given every six hours.

On January 5th, the patient was improved; more conscious; she took milk freely. Pulse 120, stronger and more regular. The bowels were freely open. On January 6th, she was better in every respect. On January 7th, she was improved; pulse 108, stronger. She was ordered to take digitaline and arseniate of strychnine three times a day, in addition to the nitro-glycerine. The bowels acted several times a day freely, without medicine. On January 10th the patient had steadily improved, was quite conscious, and able to converse. The bowels not acting well, a dose of sulphate of soda was ordered to be taken every morning. The nitro-glycerine was given less frequently. Milk was freely taken. The secretion of urine was much greater, and the albumen was reduced to one-sixteenth. On January 13th, she had improved steadily, but was becoming tired of milk; she was allowed to have some fish. The nitro-glycerine was ordered to be taken every twelve hours only. The pulse was reduced to 84, steady and full. In the evening, whilst drinking a cup of milk, she suddenly fell backwards unconscious, and with complete paralysis of the right side. Neither medicines nor food could be taken, and the patient gradually sank, and died on the morning of the 16th, fourteen days after the first symptoms had appeared. The friends not permitting a *post mortem* examination, I was unable to find out if the second attack was but an extension of the first mischief, or the rupture of a blood-vessel. I rather incline to the latter view of the case.

One further remark I wish to make with regard to the power of nitro-glycerine in causing free evacuations of the bowels. I believe it to have been useful in the case I have mentioned, on this account, as well as in dilating the blood-vessels. That it has an aperient action in certain cases, I have verified in several instances.

CASE OF STRYCHNINE-POISONING: RECOVERY.

By R. COCKBURN, M.R.C.S.

Surgeon-General (retired) Bengal Medical Service.

THE article by Dr. Robert Barnes, in the BRITISH MEDICAL JOURNAL for April 1st, on "The Antidotes for Strychnine," reminds me of a case of accidental poisoning by strychnine, which came under my care several years ago, while I was Civil Surgeon of Benares in the Bengal Presidency; and the publication of the following notes of the case may prove interesting, affording, as they do, additional proof to that supplied by Dr. Barnes' case, of the possibility of recovering from a poisonous dose of the drug, if treated on the lines indicated by him. Knowing of no antidote that would "destroy or neutralise the poison in the stomach, or in the system," I adopted the only means, which occurred to me at the time, for counteracting the effects of the poison (these being in accordance with the first and third indications for treatment

now laid down by Dr. Barnes), and, as will be seen, with the fortunate result of recovery of the patient.

On August 26th, 1873, at 11 a.m., a strong, healthy Mahomedan, aged 25, was brought to me, said to be suffering from the effects of a dose of medicine which he had taken about 8 a.m. for fever, supposing it to be quinine. Soon after taking it he began to feel a severe burning pain in his stomach, and this gradually increasing, he begged his friends to bring him over to me. On his arrival his friends showed me the bottle from which he had taken the supposed quinine, and in it I found about a drachm of strychnine tolerably pure, only a little discoloured. Of this he stated that he had poured into his hand and taken, without weighing, a quantity which he thought to be a proper dose of quinine. He was complaining of a severe burning pain in the epigastrium, and spasms of the muscles of the back and legs had set in, opisthotonos being well marked. Having no sulphate of zinc at hand just then, I gave him half a drachm of ipecacuanha powder, followed by copious draughts of warm water; these he took pretty readily, but with some effort; in about ten minutes vomiting occurred, but not freely, so I repeated the dose of ipecacuanha, after which vomiting was very free, the contents of the stomach being ejected with great force. After this, the tetanic spasms continuing to increase, at 3 p.m. I commenced the inhalation of chloroform, which soon relieved the spasms and put him into a good sleep for about an hour; on awaking, the spasms returned, and chloroform was again administered with the same good effects. At 7 p.m. the spasms had much decreased in frequency and force. Chloroform inhalation was continued at intervals, as required, till about midnight, by which time the spasms had nearly ceased, and by morning completely so, his only complaint then being of pain and soreness in the muscles of the back. The man was perfectly conscious throughout, and after the emetics had freely acted, he showed me how much of the drug he had taken, which, on being weighed, was fully two grains. He stated that he had taken no food that morning, either before or after taking the medicine, and this was confirmed by the character of the vomit, which was quite free of any food. This, of course, made me less hopeful of his recovery. The way the man accounted for the possession of the drug was, that one day, about a month previously, he had picked up on the road a paper containing it, and, on showing it to some friends and being told it was quinine, he had put it carefully away in a bottle for future use, and having, the night before taking the dose, had an attack of fever, he thought he would make use of it, and did so with the consequences above described.

PELIOSIS RHEUMATICA.

By J. McNAUGHT, M.D., M.R.C.S., Newchurch-in-Rossendale.

The two following cases, extracted from my note-book, may be of interest, if read in connection with those brought before the Harveian Society by Dr. Stephen Mackenzie, and reported in the JOURNAL of March 18th.

On April 10th, 1881, I saw a female child, aged six years, whose mother stated that for the last fortnight small red spots had come over the legs and thighs, and gradually died away in two or three days, to be succeeded by fresh crops. The child had complained of pain and stiffness in the legs, and had been feverish and out of sorts. I found her in bed, unable to walk, complaining of stiffness in the legs and pain in the knee-joints, which were slightly swollen. The skin was hot, the tongue foul, and the bowels constipated. Scattered over the legs, thighs, and buttocks, were numerous purple spots, varying in size from a pin's-head to a sixpence. They were unaltered by pressure. The gums were normal, and there were no spots higher than the hips. These discolorations gradually faded away, passing through the varying tints usual to a bruise in about four days. They were succeeded by a fresh eruption of spots of a brighter red colour, rather more raised and unaffected by pressure, and they were now freely scattered over the arms as well as the legs. There was considerable fever and loss of appetite. She was pale and anæmic, and at the apex of the heart a systolic murmur was heard. On the 25th she was better, the spots having faded to a dirty green colour. In a day or two a fresh eruption occurred, and there was a return of the feverishness and of the pain in the joints. The case pursued a similar course for some weeks, the spots fading in about four days, to be succeeded by a fresh crop, which came out usually during the night. There was once or twice slight epistaxis. The treatment at first consisted of liquid extract of ergot, wine, and nutritious food; but as this seemed to do little good, she was put on iron, and then quinine; but seemingly with little benefit, for the disease appeared to gradually disappear independently of treatment at the end of three months. This case corresponds closely to the

description given by Dr. Mackenzie of peliosis rheumatica. I was struck by its peculiar features at the time, and noted it accordingly.

The second case presents very different features. In March 1881, I saw a male child, aged 18 months, which had recently been suffering from teething, irritation, and bronchitis, and was left in a weak condition. The mother said she saw nothing peculiar about it when put to bed at night, but in the morning noticed the pillow much stained with blood, evidently from the nose and the face, as it was when I saw it. One side of the face and eyelid were found of a deep black colour and enormously swollen, as if from a very severe bruise. The other eyelid was discoloured, but to a less extent. On the tip of the tongue were three punctiform ecchymoses, and scattered over the scalp and lower extremities were a few others, not by any means numerous nor of large size. They were unaffected by pressure. The gums were slightly but decidedly spongy below the front teeth. The child was feverish and extremely restless. The treatment was liquid extract of ergot, and for a day or two some improvement took place. Free epistaxis occurred on the third day, and on the fourth night death took place suddenly, probably from extravasation into the lungs, so far as I could gather from the statements of the parents. This is an undoubted case of purpura hæmorrhagica, and presents a marked contrast to the first one. The points of special interest are the early age of the patient, the spongy state of the gums, usually said to be absent in purpura, and thus distinguishing it from scurvy, and the sudden death.

CLINICAL MEMORANDA.

ON THE PRESENCE OF OIL-GLOBULES IN THE URINE.

THE presence of free oil in the urine is a sufficiently rare occurrence, I believe, to deserve a brief record. On referring to Dr. Bristowe's *Treatise on Medicine*, I find that "the presence of fluid fat in the form of globules is said to have 'occasionally been observed,' so that it, as a symptom, is by no means common.

I am at present attending a young man, aged 19, the subject of advanced phthisis, who is taking small doses of cod-liver oil twice a day, and his mother about a week ago remarked that she did not think the oil was doing her son any good, as he was daily passing it just as he took it, meaning that the oil was to be seen unchanged floating on the surface of the urine. I was naturally struck with his account of such an unusual symptom, and at first thought that the oil, if it were oil, had gained access to the urine from without in some way or another. I, therefore, directed her to wash the vessel carefully with soap and water, and then to dry it with a clean cloth before her son micturated again, and then to send me some in a clean bottle for microscopical examination. This the mother has done twice, and the result in each case has been the same. I may say that I personally superintended the procuring of the urine on the second occasion. With the naked eye oil-globules were distinctly to be seen floating on the surface, and, on placing a drop under the microscope, the characteristic appearance of the globules could be readily observed. The nitric acid test showed no albumen.

This last day or two the patient has been unable to continue taking his oil, and, as a result, the unusual symptom has disappeared.

O. BOWEN, M.R.C.S.ENG., ETC.

Liverpool, April 8, 1882.

GALL-STONES IN AN INFANT THREE MONTHS OLD.

AT what period of life the formation of gall-stones may be expected is not accurately stated by medical writers, but I think it is tacitly understood that they are surely to be found before puberty.

The following case will be interesting as demonstrating that, at a very early age, gall-stones may be formed and voided, and instructive as an aid in diagnosing the causes of persistent crying in infants, which cannot readily be accounted for by the usual diseases common to childhood.

Recently, I saw a male child, aged three months, who had been entirely brought up at the breast, and who, with the exception of an icteric turn during the first month of its existence, had been very healthy. At six o'clock in the evening, after having been nursed, it commenced to cry, and continued almost uninterruptedly to do so for six hours, when a sedative mixture was administered, which procured disturbed sleep for the little sufferer during the remainder of the night. In the early morning a dose of castor-oil was given, which soon produced an evacuation. On examination of the diaper that was removed, the motion appeared healthy, but the eye was arrested by three small