the plug to be pushed by the blood a little further to the next bifurcation of the artery, at which time the second series of milder clonic spasms, followed by semicoma, occurred. The gravity of the symptoms in each attack of convulsions and stupor would be proportionate to the calibre of the vessel through which the embolus was passing at the time, and the relative amount of brain deprived of blood by its occlusion. One peculiarity of the case is that, not only was there no aphasia (apparently proving the absence of any embolus in the left middle cerebral artery), but at one time quite the reverse. Shortly after the first coma, the patient's intellect was active, and her vocabulary preternaturally copious for the expression of thoughts which her tongue was glib to utter. After the second coma, however, the mechanism of speech was for a short time deranged. The œdema of the brain noticed at the necropsy might be *post mortem*, or part of the general anasarca. If the latter, to what extent would it influence the anæmia of the cerebral substance during life?

Treatment could be only palliative, and consisted in quiet, with an occasional hypnotic, or sedative draught; a course to which the parents, on an explanation of the nature of the case, readily acceded.

TWO CASES OF ANIMAL POISONING.*

By JOSEPH HINTON, M.R.C.S., Warminster.

THE cases which I propose to relate may prove interesting, as forming illustrations of the modes by which the human frame may be the receptacle of an animal poison, whilst they also serve to show the danger, sufficiently well known to most of us.

CASE I.—Mrs. C., a stout florid woman, aged about 40, of sedentary habits, was first seen by me on September 16th, 1871. She gave this history. On August 24th, she was bitten between the third and fourth metacarpal bones of the left hand by a rat. She paid but slight attention to it, and in a few days the traces of the accident had almost disappeared. Two or three days before my visit, she felt the hand uncomfortable, and there was some degree of general *malaise*. I found the two smaller fingers puffed, some swelling and redness on both surfaces of the hand, at the heads of the two metacarpal bones, with faint lines of redness extending up the arm; no great discomfort in the axilla. On the dorsal surface there was an indistinct feeling of fluctuation; but on pressure there was but slight tenderness. Her general condition was unpromising; her countenance was anxious; she was feverish, and appetite had left her; the tongue was particularly foul, and the bowels were costive. I ordered her to rest the arm absolutely in a sling, and painted the parts with tincture of iodine, giving her a brisk aperient and some saline. On the following day she was greatly improved; the bowels had acted freely, and the local affection was much less painful. On the 19th, she had a sharp attack of sore-throat and a return of feverish symptoms. Chlorate of potash mixture and the use of a gargle relieved this, and the following day she appeared decidedly better. I prescribed some quinine, and, as she slept indifferently, some chloral at night. For a few days progress was unchecked, but about the 27th the local condition again became more urgent; the palmar surface was now decidedly the more swollen; for several days this continued, till there was a very doubtful appearance of suppuration. This increased, but, just as the propriety of opening became a matter of daily consideration, the swelling subsided, and the local ailment was never again troublesome, though occasionally the parts itched. About this time red blotches, varying in size from a sixpence to half-a-crown, gradually appeared over the body; several round each eye. These were tolerably defined in margin, slightly raised, giving a sensation of hardness. On pressure, the redness did not quite disappear. These spots remained more or less visible for four or five weeks, but disappeared before the fatal issue; they never suppurated or altered in character. With the accession of these spots, the tongue became preternaturally clean and sore, and the vital powers began to give way. Nausea was constant, and in a few days vomiting became incessant. For this latter symptom, the Pharmacopœia yielded up one by one all its vaunted treasures, each for the first day or two of trial appearing useful. Suffice it to say that she was given on October 1st, bismuth with prussic acid; October 4th, bromide of potassium; October 9th, quinine, with mixed acids and prussic acid; October 12th, effervescing mixture, with prussic acid; October 15th, effervescing mixture, with lemon-juice; October 18th, mixed acids; October 22nd, oxalate of cerium, and a blister to the epigastric region; October 29th, oxide of silver; October 31st, creasote mixture; and November 10th, sulphurous acid. Creasote, certainly, was the most beneficial. On

October 18th, she was seen by Dr. Falconer in consultation; and, at his suggestion, the mixed acids were again tried. When vomiting had thoroughly set in, the matters vomited were always of a dark sap green colour; and very rarely did she have twelve hours' freedom. On October 31st the throat again became very sore, the tongue glazed and dry, deglutition difficult, the pulse very flickering, and her general condition so bad that for thirty-six hours death appeared imminent. I then ordered five grains of quinine and half an ounce of brandy, with opium, to be given every four hours by injection. She rallied, and from this date to that of her death, on the 11th November, she was kept alive chiefly by these means. I have said that creasote was decidedly the most successful in allaying the distressing vomiting; and, after she had taken it two days, there seemed just the hope that she would yet weather the storm. She took several meals of bread and milk, small pieces of partridge, etc., and appeared to enjoy it; but this only lasted four-and-twenty hours; the vomiting again returned; she sank into a semi-conscious state, and died on November 11th, very nearly three months after the occurrence of the accident.

My patient lived in the heart of our little town; she was bitten in the cellar, and no doubt the rat was a sewer-rat, and might probably have been just feeding on some decomposing animal matter. The rat-catchers who kill them in the ricks never scruple to lay hold of them, and are often severely bitten, so far as I have seen without any ill effects; but then it must be recollected that the rats are in these instances gaminivorous. My partner Mr. Bleack saw in consultation a case of rat-bite under the care of my friend Mr. Grubb. This case was near the town, and the man's life was in great jeopardy for several weeks. Since the fatal issue of my case, I have often considered that my patient's position might have been better had I opened the dorsal aspect of the hand at first. Any way, the case has so far impressed me with the gravity of such an accident, that I should in a similar case recommend (if seen at the onset) excision of the wound and caustic; and, supposing the time for this to have passed, I should open any suspicious swelling at the seat of injury.

CASE II.—Mrs. D., aged about 27, a very small and decidedly weakly woman, sent for me hurriedly two years since. A second messenger met me. I found my patient blanched, cold, and almost pulseless—her tongue and breath being also cold, giving me the appearance of a case of cholera collapse. She could only speak slowly, and in a whisper; but by degrees she gave me this explanation of her condition. She was perfectly well, engaged in her domestic duties, when she begged her servant to bring her a certain saucepan. In this identical saucepan, some six weeks previously, mackerel had been cooked. The servant believed her saucepan to be clean. The mistress took off the cover to examine, and was immediately regaled by the most horrible stench, which very nearly knocked my patient down literally. She was immediately very sick and faint, very soon had a great desire to relieve the bowels, and for this purpose went up into the garden. She remained there longer than appeared necessary. She was sought for, and was found there, cold, blanched, and as feeble as possible, looking more dead than alive. She was carried up stairs, and, as I have said, was able to tell me this in a low whisper. She further said that the bowels had acted most copiously in the privy, and that even since she had been in bed the slightest movement brought on a very loose action. No flooding of any kind occurred. By the aid of stimulants and other appropriate measures, she soon rallied from this alarming condition.

Now here, I take it, we have another form of animal poisoning, in which the nasal membranes formed the door of admission; and, though the matter appears trifling enough, the result placed a life in peril for several hours. I have said she was a small woman, but she is particularly so, and is also of feeble powers; still, I have attended her in three confinements, which she has borne pluckily and well, and her powers of endurance are greater than her appearance would indicate; but I have never seen her so utterly prostrated as on this occasion.

THERAPEUTIC MEMORANDA.

CONVULSIONS TREATED BY CHLOROFORM.

IN confirmation of the experience of Mr. Mowatt, recorded in the JOURNAL of May 31st, I may mention that some years ago, in a severe case of convulsions in a child aged seven months, I tried the chloroform treatment; and, finding it beneficial, have continued it to the present time with the best and most successful results. I only use the warm bath, etc., where I dare not treat with chloroform. When I am called to a case of convulsions, the first thing I do is to administer chloroform,

* Read before the Bath and Bristol Branch.