I commenced with six cells of the continuous current every other day, and this did him so much good I did not increase it. At the end of the second week the pain was nearly gone, and the only thing he complained of was weakness of the limb, but gradually the strength and size came back.

This seemed to me a marked case of asthenia of the nerve. And so the faradisation increased the pain by giving a shock to, and causing contraction with spasm of, the enfeebled nerves, and most likely breaking up some nerve-cells instead of causing the formation of fresh ones as the galvanism does.

Burwood-place, Hyde-park, W.

INTRACRANIAL ANEURISM.

BY WILLIAM E. HUMBLE, M.D. LOND.

I AM glad to be able so soon to forward, according to promise, an account of the termination—and, I rejoice to say, successful termination—of the case of intracranial aneurism which was published in THE LANCET of Oct. 2nd. The fact of its course having been carefully watched from the commencement, and the very interesting and distinct phenomena which attended the consolidation of the aneurism, render the case one deserving of record, and its successful issue affords encouragement for a future trial of a similar mode of treatment.

It will be recollected that the first symptoms of aneurism occurred in March, and the disease, which was at first diagnosed as a case of some kind of tumour at the base of the brain, was recognised to be aneurism at the cavernous sinus about the end of May or beginning of June.

The aneurismal bruit was first heard by the patient on the 17th of March, and by myself, by means of the stethoscope, at the above-mentioned time. The operation of ligature of the carotid having been declined by the patient, and it being found impracticable to carry out fully Mr. Tufnell's method of treatment by absolute rest and restricted diet, I determined on adopting Dr. Balfour's plan of treatment by iodide of potassium. On the 26th of June she began with nine grains of the iodide daily, and the dose was regularly increased till she took thirty-six grains daily. This treatment was steadily continued for just four months, and it is noteworthy that these large doses of the iodide (from Apothecaries' Hall) produced no appreciable symptoms whatever, the patient improving in general health and stoutness.

During the whole of this time the aneurismal bruit continued without intermission, varying in loudness somewhat according to the force of the circulation, and much resembling the sound of a cardiac valvular murmur. About the latter part of September it became louder and rougher for a week, but then subsided to its former intensity. For the last fortnight preceding its cessation I fancied it was not quite so loud, and rather softer than it had been. During the last two months the strabismus diminished, but there was more neuralgia of the brow and side of the head, and she used to complain of the pressure of the stethoscope. The improvement in her general health has been observed by all her friends.

On the morning of October 21st, I was sent for hurriedly at 9.30 A.M. She told me she had had a bad night, the aneurismal bruit having been very loud. She was taken during the night with vomiting and purging, with some headache. The vomiting was attended with much urging, and she was purged, she says, between twenty and thirty times. About 6 A.M. the aneurismal sound became different and constantly varying, at times resembling clanging wires. It then became very feeble, and she heard what resembled several cracks. She then felt very strange, and was astonished at everything appearing unusually silent, when she observed that the sound had ceased. When I saw her no bruit whatever could be heard. She was a little pale and weak, partly from the bad night, and partly because she feared some serious change for the worse had occurred. I explained to her that probably the wished-for event had

occurred, and that the first step towards consolidation of the aneurism had been gained. I prescribed some medicine to stop the sickness and diarrhoea, and enjoined the greatest quietude in the recumbent posture, but with the head raised. The right side of the head was very tender, so that she complained very much of the pressure of the stethoscope. This neuralgic condition has existed more or less for some weeks.

Oct. 22nd.—Passed a tolerably good night. No return of the bruit. Says that for about an hour to-day she had slight throbbing within the head. Complains of a strange sensation in the neck and front of the chest, especially if she laughs slightly. No murmur can be heard. Right side of the head still tender, and slight noises, as the opening or shutting of a door, annoy her. Some headache. Says how strange the silence appears to her after seven months and a half of loud pulsation. Iodide to be continued in half the quantity.

24th.—Has suffered more from headache, but not severely. Says she has experienced slight throbbing on the other (left) side of the head. No bruit heard. Pulse continues rather weak, but otherwise normal. Will not remain in bed as advised. The squint has nearly disappeared.

From this time she continued to improve. The throbbing continued for a time in the left side of the head, and was explained to her to be no doubt owing to the artery on that side being enlarged to compensate for the impervious state of the diseased one. She now (Nov. 26th) continues quite well, except some neuralgia. The throbbing has ceased. No bruit has been heard since its cessation on the 21st of October, and I imagine that, five weeks having elapsed, the cure may be considered complete.

Corfe Castle, Dorset.

NOTE ON AN ETHER INHALER.

BY MARTIN OXLEY, L.K.Q.C.P.,

PHYSICIAN TO THE LIVERPOOL INFIRMARY FOR CHILDREN.

WHEN in New York this autumn, Dr. Emmett, surgeon to the State of New York Woman's Hospital, showed me an ether inhaler which is the invention of Dr. Allis. It seemed to me at first sight to be the best contrivance for the administration of ether that I had seen, and on trial I have found it quite as perfect as I expected. Its advantages are these:—The ether being very thoroughly mixed with air, the patient does not suffer from the suffocation usually felt at first inhaling; there is a large evaporating surface. A very much smaller quantity of ether is used, and less escapes into the room than with the usual mode of giving this anæsthetic; the ether can be dropped from a bottle on the distal end of the inhaler, without removing it from the face; the mask is soft and pliable, fitting accurately to the nose and mouth; and, lastly, it is of very simple construction, and cannot get out of order.

I have given the inhaler a very fair trial, and can confidently recommend it. Mr. Wood, of 81, Church-street, Liverpool, has made a few from the pattern of the one I bought in New York, and has had the framework electro-

plated. The inhaler consists of two stout oval frames which are joined together by wire bars three inches long and about one-eighth of an inch apart, making a sort of small birdcage open above and below; through these bars a bandage is

threaded, so as to fill up the inside of the cage, the edges of the bandages presenting at its open ends; over this frame is drawn a piece of stout sheet india-rubber, which has been stitched together at the edges, so as to make a covering for the frame, projecting over one end two inches, to form the mask, and at the other one inch. The ether is poured on the bandage, which forms a close, well-made artificial sponge.

Rodney-street, Liverpool.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CHRONIC ULCERS OF BOTH LEGS; DRY GANGRENE OF BOTH LEGS—GRADUAL IN RIGHT, SUDDEN IN LEFT.

(Under the care of Mr. HULKE.)

AN extremely interesting case of dry gangrene of both legs is at the present time in this hospital. Such a condition as that described below is, we believe, rare, if not altogether unique, in surgical practice. The explanation offered of the mechanism of the gangrene by Mr. Hulke is not only ingenious, but the only one that would account for all the facts. We shall report later on the subsequent progress of this remarkable case. For the notes of its history and progress we are indebted to Mr. G. Sherman Bigg.

The patient, an illuminator, aged thirty-three, had been in the hospital during several of the summer and early autumn months, with chronic ulcers of very old date in both legs. He was discharged on Oct. 12th, greatly benefited by the rest and the care bestowed on him, but with the ulcers incompletely cicatrised. It indeed seemed scarcely probable that they would ever completely and soundly close. After this he stayed at home a fortnight, and then went to his work—illuminating—for two days. On the third morning he noticed that the lower (the unhealed) part of the ulcer in the right leg, just above the inner ankle, was slightly discoloured. It was bluish, then greenish, and next day black. This discolouration shortly extended from the ulcer to the instep, and soon the third and fourth toes became blue, and later black and shrivelled. In this state he applied on the 23rd of November to be readmitted. The two toes, a patch of skin on the instep half the size of the palm of the hand, and the lower half of the ulcer in the right leg were in a condition of dry gangrene. He was placed in Handel ward, and the foot and leg were wrapped in dry cotton-wool, and, as he complained of much pain, he was ordered opium in doses of one grain at intervals, regulated by his suffering. Next day it was ascertained that in the night his left leg had become very painful, and the left foot in the morning was found cold and numb; it was also dull white and shrunk, and the cutaneous veins, instead of preventing their usual prominence, were indicated by faint, scarcely marked lines, like little channels. It was now discovered that all arterial pulsation was absent below the groins, nor could any be felt in the left external iliac artery. Mr. Hulke was very doubtful whether there was not a feeble pulse in the right external iliac, the uncertainty on this point being caused by the suspicion that the extremely faint pulse which Mr. Hulke thought he detected here might actually be in the deep epigastric artery, and this suspicion was heightened by the very conspicuous collateral distension of the communicating veins of the internal mammary and epigastric systems. This latter feature disappeared after about twenty-four hours.

In the course of some clinical remarks on the 7th inst., Mr. Hulke observed:—This is a case of gangrene beginning

and slowly progressive in the right leg, and suddenly supervening in the left leg. The gangrene was dry, and dependent on arterial obstruction. The disease began in the right leg, and the hard cylindroid form of its superficial femoral artery, so far as it was accessible to touch, showed the obstruction to be due to clotting. What, then, was the origin of this? Clots, Mr. Hulke said, originate either at the place where they are found, or they have their origin in a plug or embolon, often a morsel of fibrine, brought by the blood-stream from some distant point. Was the clot in the right leg, so to speak, autochthonic or embolic in its inception? Turning to the heart, there was not any evidence of the existence of valvular disease, so that it was highly improbable that a plug should be derived from this source. Next, by listening to the abdominal aorta, this vessel could be heard to pulsate unusually forcibly for a certain distance short of its bifurcation; at this point the pulsation became very faint, and was now quite inaudible. Dr. Greenhow co-operated in ascertaining these data. The fulness of the patient's belly did not allow of an absolute decision, but the conviction was very strong that the inaudibility of the pulsation here was not due to the presence of any tumour or other extraneous mass overlying the vessel, but to its actual cessation. The origin of the clotting had, then, to be sought in the limb itself. The two chief factors on which the fluidity of the blood depends are, they were aware, the constant motion imparted to it by the heart, and the healthiness—in particular the smoothness—of the vessels through which it circulates. The most common disorder which roughens the inner surface of the arterial tubes is chronic deformative endarteritis, a process exactly corresponding in the textural alterations it induces to endocarditis. Chronic endarteritis is, however, usually a widely diffused disorder, and as the arteries of the upper extremities and those of the head bore no traces of its presence, both Dr. Greenhow and Mr. Hulke felt compelled to exclude it from consideration. This narrowed down the field of inquiry to the part where the gangrene first showed itself—the lower end of the chronic ulcer. This first, it will be remembered, became bluish-green, then black—in short, gangrenous. He thought it most likely that some of the smallest vessels, bordering on the ulcer, first were obstructed, whether from textural changes induced in them by the proximity of the ulcerative process, or whether some of them gave way and the occluding clot which sealed them passed inwards along their lumen, is of little moment. Once begun, the clot extended peripherally, blocking the arterial twigs supplying the skin of the instep, and later those distributed to the toes, killing those parts and it extended also centripetally, rising through the tibial arteries, through the superficial and common femoral arteries, the external and common iliac arteries, till it projected into the lowest part of the abdominal aorta; there its tapering apex, encountering the downward rush of blood in the main trunk, was swept off by it, plugging suddenly the left iliac or one of its main divisions, when, the obstruction being complete on both sides, the clot grew upwards for a certain height into the aorta itself.

What, Mr. Hulke asked, is the probable forecast in such a case? Though very grave, the man's condition was not hopeless. The gangrene was still slowly spreading, but he judged that it would not ascend above the knees. By using dry dressings desiccation of the mortified parts would be arrested, and by that means the fetor would be kept down and the amount of infective putrid diffusible substances in the limb lessened, and with this the risks of a fatal septicæmia would be diminished. Oakum and charcoal were very useful for this.

In discussing the question of amputation, Mr. Hulke remarked that to do so now, before the eventual limits of the gangrene were known, would be to court gangrene of the stump, necessitating, if the man rallied from the double operation, a second amputation nearer the trunk. Even should a line of demarcation form, the safer plan would be to simply cut through the dead parts, and leave an inch or so of them to be spontaneously thrown off. Such stumps would of course be conical, but later the soft parts could be pushed back and a piece of bone removed if necessary. A not very small experience of gangrene from frostbite gathered in the Crimean campaign, and the unfortunate results of amputation in dry gangrene of limbs in typhoid fever, had taught