After maintaining for three days his minimum weight, on a small and somewhat uncertain quantity of food, he took, on the tenth day, all the diet given him. I have already shown that, by calculation, it contained in ounces 3.72 of albuminates, 19.41 of carbohydrates, and 1.36 of fat. Taking these together, we have one part of nitrogenous food to six of carboniferous. The total nitrogen is 255 grains, the total carbon 5119 grains, including 875 grains contained in the nitrogenous substances. Absolutely, these are high figures, especially when we have the man at rest; while the relative proportion of carbon to nitrogen is also considerably above the usual dietary estimates.

As far as mere nutritive elements are concerned, we have a supply here not only capable of repairing the ordinary tissue-waste, but sufficient also to provide a surplus, which the system is unable immediately to utilise, beyond storing it up in the form of adipose tissue. This additional fat, arising from excess of hydrocarbons in the blood, adds merely body-weight and bulk. There is no corresponding increase of the more highly organised tissues which give forth strength and stamina, and consequently these fall off, and are besides rather clogged by the fatty accumulation. It almost invariably happens that, if, in the course of several months, a man's health is not affected by the monotony of the diet of which I have been speaking, he gains in weight, but not in strength. He becomes stouter, but not proportionately strong, as he is deprived of that healthy use of his muscles which preserves their power and vigour. The original body-weight (107½ lbs.) having been reached in the case of H. W., the excretion of urea for the last four days averaged 307 grains, being at the rate of 2.8 grains per pound of body-weight in twenty-four hours, and that on a non-animal diet containing 250 grains of nitrogen.

December 23rd, 1869. It is curious to note the obstinacy with which this man refused to take his food. Although it was put into his cell regularly, and remained there all night, he would not, and did not, touch it, and he continued this with very little interference to his bodily functions until the sixth day. It shows how persistently the body clings to its life, eating itself, as it were, by a process of capillary cannibalism, rather than die out at once for want of food supplied by the proper channel to repair the natural waste.

ON BICHLORIDE OF METHYLENE: AN ACCOUNT OF ONE HUNDRED CASES OF ITS USE AS AN ANÆSTHETIC.

By PHILIP MIALI, Surgeon to the Bradford Infirmary.

(*Editorial Abstract of Original Paper.*)

THE author commonly uses the cylinder introduced by Mr. Peter Marshall. Most of the administrations were for operations on the eye; but it was used also for amputation of the thigh and leg, and removal of the breast.

Insensibility in adults was generally produced in from two to five minutes; the average being 3 minutes 20 seconds; the minimum, 1½ minute; the maximum, 5 minutes.

One dose of a drachm was generally sufficient to produce anæsthesia. In females, less than this will suffice. More than a drachm and a half was never found necessary to produce the first insensibility. The maximum quantity required before the completion of an operation was three drachms and a half.

The author proceeds to compare these results with those from the administration of chloroform. The average time taken to produce full anæsthesia was: in

Men—3 minutes 20 seconds with bichloride of methylene.

6 minutes 20 seconds with chloroform.

Women—2 minutes 22 seconds with bichloride of methylene.

4 minutes 18 seconds with chloroform.

Children—1 minute 16 seconds with bichloride of methylene.

2 minutes 24 seconds with chloroform.

The quantity of chloroform required was about double that of the bichloride of methylene. The duration of insensibility after removal of the inhaler was not found to vary with sex and age, as the time of the invasion was. It was not uncommon to find the patient completely conscious and walking away in less than three minutes after the commencement of inhalation.

Vomiting occurred forty-two times out of ninety-seven; nausea merely, six times. Vomiting did not occur once before anæsthesia was complete. The author thinks that the use of the bichloride is not likely to be much more free from consequent vomiting than chloroform.

The pulse was unaltered in 4 cases, quickened in 9, and lessened in frequency in 23.

The respiration was nearly always quickened. In five cases in which

the respiration gave warning of impending danger, prompt measures were successful in restoring the patient.

The author is satisfied as to the safety of this anæsthetic, and thinks it is easily managed with average precautions. It is important to exclude rather than admit air. The apparatus should be well applied to the face. In small operations, it is decidedly preferable to chloroform, and for larger ones quite as useful.

TWO CASES OF EMPYEMA SUCCESSFULLY TREATED BY DRAINAGE-TUBE.

By WILLIAM PALEY, M.D., Peterborough.

CASE I.—Miss B., aged 10½, of good constitution, was seen by me on the 3rd of March last, for a most severe attack of double pneumonia, complicated with pleurisy on the right side, coming on after measles. The symptoms were so urgent, and the exhaustion so great, that the child was only kept alive by the free use of stimulant and most careful feeding. I saw her again on the 18th of March, and found her reduced almost to a skeleton, so weak that she was unable to move a limb; the left lung was slowly recovering, but on the right side slight effusion had commenced.

On April 3rd, in consequence of the urgent dyspnoea and increasing debility, the chest was punctured by a trochar in the ordinary method. About four pints of thick pus were removed, and the wound closed. Considerable relief was afforded for the first four days after the operation, but in ten days' time the chest was quite full again, and the child as weak as ever—indeed, the chances of recovery were so small that I had great difficulty in persuading the parents to allow any further operation.

On April 13th, the following operation was performed. On a level with the ensiform cartilage, and a little to the right of the nipple, a direct opening was made into the chest with a medium-sized trochar. After about a pint of pus had been discharged, an India-rubber-tube (such as is used for feeding-bottles), about two feet and a half long, and with a few small openings cut into it, with a pair of scissors, at the end to be left in the chest, was passed through the cannula for about six inches. The cannula was then withdrawn over the tube, and the latter was securely tied to two pieces of plaster above and below the wound with a piece of silk, the patient lying near the edge of the bed, and on the affected side; the lower end of the tube was placed in a basin half full of water, on a chair at the bed-side, and kept under water by a weight tied to it. No operation could have answered better. Not a single bad symptom or difficulty of any kind occurred during the whole subsequent treatment. The tube was kept in for six days; the fluid was slowly evacuated without any air being admitted into the pleura; the lung expanded as the fluid was withdrawn gradually, taking its place, so that no vacuum was ever left in the chest. The tube, being quite soft, caused no pain at the wound, and did not seem to irritate either the lung or pleura by its presence in the chest. When the tube was withdrawn, the opening in the chest was kept covered by a piece of wet lint, with oiled silk over it; and for the next four months small quantities of pus continued to be discharged—at first, daily, and afterwards, from time to time. After a fortnight, the child was allowed to get out of bed; and, as she gained strength, was carried out into the open air as much as possible; and, as soon as she could be moved, was sent to the sea-side, where she remained six weeks.

I saw her about a week ago, and, save a very little falling in of the chest under the right clavicle, scarcely any other trace of the serious mischief that had previously existed was left. The chest was fairly resonant all over that side, and a well-marked respiratory murmur existed throughout the lung. The general health and strength of the child was as well as ever. The wound had been quite closed since the end of August last.

For all the details of the operation and its successful performance, I am indebted to my friend and colleague at the Hospital here, Dr. T. J. Walker.

CASE II.—The next case was even more successful than the first. Master A., aged 10½, of fairly strong constitution, had been ill with pleurisy, followed by empyema, since the end of March. The child had been most carefully treated from the first, under the superintendence of one of our best local physicians. The chest had been twice tapped by a trochar, and the wound closed in the ordinary method before I saw him, on the 16th of June last. I found the whole left side of the chest quite full of fluid: the child could only lie on the affected side; was greatly reduced in strength; had very little appetite; and the abdomen was large and distended. The operation was performed by Dr. Sinclair in my presence on June 17th, precisely in the same way

and at the same part of the chest, only on the left side, as I described in the first case, and with the same satisfactory results. As the effusion had existed a much longer period, I resolved to leave the tube longer in the chest, and kept it there for fourteen days. On the 28th, Dr. Sinclair wrote: "Our little patient has progressed most favourably since the operation. He has never had a bad symptom. At least eight pints of pus have been discharged through the tube, and there is still a slight discharge, about a tablespoonful in twenty-four hours. As far as the case has gone, we must look on it as a perfect success." I saw him again on the 2nd of July, removed the tube, and covered the opening with wet lint, as in the first case. Dr. Sinclair had allowed him to sit up for a few hours daily during the last five days, tying the end of the tube first to prevent the admission of air into the chest. The boy had greatly improved in general health, and the chest was partially resonant, but little respiratory murmur could be heard on that side. In a week after the tube was removed, the boy was out in the open air. The wound remained open and kept discharging slightly for a month; it then healed up, and has never broken out since. The boy went to the sea-side for about three weeks; and when I saw him, on October 6th, he looked in perfect health. The chest was very little contracted, clear on percussion, and the respiratory murmur was quite audible all over the left side.

CLINICAL MEMORANDA.

[Under this head, we shall publish from time to time, as materials accumulate, short records of remarkable cases in practice which are sufficiently rare, interesting, or instructive, to deserve record, but do not call for lengthened statement or comment. Brevity and point should be the valuable characteristics of cases forwarded for this column.]

ACUTE ALBUMINURIA, ACCOMPANIED WITH VERY SLOW PULSE.

By J. H. BARTLETT, L.R.C.P. Lond.

G. C., an able seaman on board the *Superb*, moderately temperate, after much exposure to wet and cold on July 31st, 1868, felt very unwell, and noticed that his urine was of a very dark red colour. Notwithstanding this, he continued his employment; but the following day he was so unwell that he applied to be admitted into hospital. On admission, August 1st, he was well nourished, but looked heavy. There was puffiness under the eyelids. His face was flushed; headache severe. There was no double vision, nor tinnitus aurium. He felt giddy and weak. He had no nausea. He was very drowsy, but could not sleep. The pupils were equal; the tongue moist and pale, with a thin fur in the centre. The bowels were confined; pulse 48, weak. The heart's apex-beat was normal; no murmur nor friction-sound. The lungs were healthy. The urine was of a deep maroon colour, and contained about one-third of albumen, fibrinous casts, blood-corpuscles, and epithelium. He was ordered to take compound jalap powder, and solution of acetate of ammonia in two-drachm doses every three hours.

On August 2nd, the symptoms were much the same; but pain in the loins was added to them. The urine contained about one-tenth of albumen, and was about one pint in quantity. The bowels were not open. Pulse 48, irregular, and weak. He was ordered to take an ounce of castor-oil immediately, and to have dry cupping to the loins.

On the 3rd, the bowels were copiously opened by the castor-oil. He was less drowsy; but the pain in the back was very severe. He had slight cough and expectoration. The puffiness of the face and eyelids still remained, as did the vertigo. Pulse 46, regular, and weak. The urine still contained albumen, but much less in quantity; the amount passed was two pints.

On the 6th, though he was much improved in every respect, and though there was now no albumen in the urine, the pulse was only 36, regular, and weak. There was no murmur or friction-sound. He was ordered to take tincture of sesquichloride of iron in fifteen-minim doses three times a day.

Aug. 15th. From the last date, the patient improved rapidly. On the 8th, the pulse rose to 78; and he was quite convalescent, and resumed work to-day quite well.

The chief point of interest in the above case is the extreme slowness of the pulse, which, from the commencement of the disease, was very infrequent; and this continued so until the seventh day of the disease, when it fell as low as thirty-six pulsations in the minute. And this is the more curious, as the patient was at that time so much better in other respects. The patient's pulse in health was not in any way abnormal.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

THE MIDDLESEX HOSPITAL.

IN Dr. Henry Thompson's male ward there is, at present, a patient, thirty-six years of age, who was admitted in August with ascites and acute renal dropsy, in whom the valuable effects of copaiba as a diuretic were, to all appearance, shown. On his admission, and for some weeks afterwards, most of the ordinary remedies, including squills, bitartrate of potash, and jalap, were employed to carry off the fluid, but still the symptoms became more urgent. Acupuncture was then resorted to, and, for the time at least, with partial success; but the dropsy did not sensibly diminish. The copaiba draught of the hospital was then given three times daily, in half-ounce doses, representing ten minims of copaiba and seven minims of liquor potassæ in mucilage and caraway water. Next day, the urine had increased to four pints, which was greater by eight ounces than it had ever been in the twenty-four hours since admission, and the quantity was pretty well kept up for some time afterwards. The man is now quite free from dropsy. This is by no means, we believe, a favourable specimen of the results which have been obtained by Dr. Thompson, Dr. Greenhow, and Dr. Liveing, at the Middlesex Hospital, from the use of copaiba as a diuretic. The remedy appears to be deserving of a more general trial.

We saw another case of interest and importance. A man, twenty-six years of age, was admitted on December 12th with colic and severe paralysis of both upper extremities, from lead-poisoning, and was immediately ordered iodide of potassium, in three-grain doses, three times daily. Ten days afterwards, he was attacked with epiphora, coryza, gravedo, sickness, severe colic, and diarrhoea, all signs of iodide of potassium poisoning; the gastro-intestinal symptoms being probably intensified by the presence of lead in the system, which, indeed, showed itself in another way by convulsive movements of the paralysed muscles of the affected limbs. The iodide of potassium was immediately discontinued, and, as the symptoms passed off, the power in the arms markedly increased. It seems that, on two former occasions, while a patient in another hospital, where he was also apparently treated with iodide of potassium for the same affection, he was seized with a similar attack, resulting in increased muscular power in the paralysed limbs. It seems fair to suppose that, during these acute attacks, the lead was carried off from the system, probably by the discharge from the intestines.

In Dr. Goodfellow's wards we recently saw two instructive cases of gastric disease. The first was a typical case of chronic ulcer of the stomach, chiefly interesting on account of the long duration (fifteen years) and the alarming state of exhaustion to which the patient had been reduced before admission. She had been supported at first by brandy and beef-tea enemata, but is now again able to eat meat, etc., without inconvenience. The second case presented precisely similar symptoms, but they had only lasted for two years; the pain, however, did not come on till two to four hours after meals; and, lately, the more severe attacks had been followed by slight temporary jaundice; here, chronic ulcer of the duodenum was suspected. Under calomel and opium treatment she was quite convalescent, and had been free from pain for nearly a month.

In Dr. Murchison's female ward is a most instructive case of nitric acid poisoning, in so far as it shows what may be done in desperate cases of irritant poisoning by judicious treatment. The patient is a woman about thirty-five years old, who was admitted in April with very severe symptoms of nitric acid poisoning. Symptoms of acute gastritis continued for several weeks, during which time rapid emaciation ensued, and exfoliation of what appeared to be mucous membrane took place. During all this time she was not permitted to take any nourishment by the mouth, as it would merely have increased and kept up the irritation of the stomach; but she was fed frequently with beef-tea and brandy injections. As soon, however, as the gastro-intestinal irritation had somewhat subsided, small quantities of milk, with ice and lime-water, were cautiously given. These were retained and gradually increased. By degrees, more solid food was tried; and, eventually, she left the hospital in July fairly nourished, if not plump, and able to digest light diet without inconvenience. A further interest is, however, attached to this case; for the patient presented herself again a few weeks since, greatly emaciated, and with symptoms pointing to gastric irritation and stricture of the œsophagus. While she is at times able