took them all bravely and obediently. And verily he had his reward. He obtained relief of his asthma. But the asthma would still return; and, as often as it returned, he betook himself to his dietetic and remedial discipline, and it went away again; and so his faith was confirmed. In process of time, however, whether the diet was too austere or the medicine too nauseous, and so the flesh began to rebel, or whether a laudable curiosity set him to find out the secret of his treatment and relief, he certainly began to question the necessity of *all* the means to the end. So, on his next attack, adhering to his dietetic rules, he bravely took no physic. But the asthma abided, and would not leave him until he had recourse to his accustomed medicines. On the following attack, he set at nought his dietetic rules, and scrupulously took his physic; and the asthma passed away as usual.

It was pretty plain that the physic-bottle contained the cure. But to which of the many ingredients did it belong? To one or two or three, or to the whole hotch-potch working mysteriously together for good? In a matter which so nearly concerned him, the patient might be pardoned for laying his rash analytical hands upon the mysterious mixture. It contained, among twenty other things, a few grains of iodide of potassium. Ingredient after ingredient was deducted; and, simpler and simpler as the mixture became, it still had equal power to abate the asthma, until the iodide of potassium was deducted in its turn, and then its sovereign power was gone. Again, all the ingredients were tried, excepting only the iodide of potassium; but altogether they did not touch the asthma remedially. Finally, every other ingredient was excluded, and the iodide left alone; and alone it displayed a sovereign remedial power.

Fortunate the man who can get rid of an asthmatic attack on any terms; but unfortunate the art that is content with a rare fortuitous and unaccountable success; it must be either retrograde or stationary. To scatter above twenty remedies, and to let hit which may, is like pigeon-shooting in companies. The bird falls; but whose gun was it that brought it down? Nobody is reputed the better marksman after a hundred volleys.

With all the credit due to pharmaceutical chemistry, and all our obligations to it, I doubt whether, in one chief respect, it has not done some harm. To bring many important remedies together, and unite them by a lucky combination, and compress them within a small compass, and so place them within the common reach, all this gives a facility of prescribing which is hurtful to the advance of medical experience. The facility of prescribing is a temptation to prescribe; and, under this temptation, there is a lavish expenditure continually going on of important remedies in the mass, of which the prescribers have made no sufficient experiment in detail. A simple implement or two, which a man has well proved for himself, is worth a whole armoury of famous compounds taken upon the general credit. A few thousand years ago, a whole people was in fear and trembling. Their enemy was at the gate. Their hope was turned to a single champion. All weapons of war were at his service. The king's own armour was offered him—his helmet, his coat of mail, his sword. He did not (how could he?) resist the vanity of putting them on. But soon he

put them off again; for "he had not proved them". And "he chose him five smooth stones out of the brook", and with one of these he did the deed which saved his country.

Illustrations

OF

HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

MEDICAL COLLEGE HOSPITAL, CALCUTTA.

IODIDE OF POTASSIUM IN THE TREATMENT OF ANEURISM.

By S. G. CHUCKERBUTTY, M.D.

WHEN I took charge of my duties as second physician to the Medical College Hospital, in August 1860, among the patients there was one of the name of Leary, who had been under treatment for some time for a pulmonary complaint. He was an Irish seaman, rather short, tolerably stout, and about fifty years of age. In addition to a harassing cough and profuse expectoration, he had at this time a pulsating tumour in the upper notch of the sternum, of about the size of a walnut, but elastic, and readily emptied by pressure. This tumour grew gradually larger and larger, and rose higher in the neck, until it was nearly as big as a small orange, encroaching somewhat on the median line. A great variety of medicines had been used for the cough, without any influence on the aneurismal tumour, until I prescribed iodide of potassium with decoction of cinchona. Soon after this, it became evident that not only was his cough benefited by the change, but the aneurism also grew harder and heavier, and lost its expansile character. The man was ultimately carried off about the beginning of January 1861, by a fresh attack of bronchitis.

At the *post mortem* examination, on opening the chest, we found an aneurismal tumour lying immediately behind the upper part of the sternum, and rising in the neck as far as the junction of the trachea with the larynx on the right side. It sprang from the inner aspect of the innominate artery, and did not involve either the aortic arch or the right subclavian or carotid arteries. It was very heavy, and as large as a pear. Its interior was occupied by a compact mass of solid coagula, leaving merely a small channel at the outer aspect, through which the right carotid and subclavian arteries communicated with the arch of the aorta; a piece of whalebone introduced into either of these vessels passing into the latter. The lining membrane of the bronchial tubes in both lungs was highly vascular, thickened, and occupied by an abundant secretion.

While the above patient was still alive, there were admitted into my wards two other Europeans—Bateman and Collyer—both suffering from aortic aneurism. These two men had been given a variety of sedatives and astringents, without relief, prior to the employment of iodide of potassium; which, in sooth, I did not order for them until I saw its beneficial effect in the case of Leary. The result proved as satisfactory as in the first case, as far as the solidification of the aneurismal sac was concerned, though it did not prevent a fatal issue.

Bateman was admitted into the hospital on November 30th, 1860, from the ship *Newcastle*, with the following history from the surgeon on board.

"John Bateman, aged 47, by profession a sailor, of a sanguineous temperament, has sailed mostly to tropical climates, been a hard spirit-drinker, never suffered from rheumatism, and has always enjoyed good health until

the commencement of this voyage, about three months and a half since, when he complained of a continued stiffness of the upper part of the chest, for which he repeatedly asked for an emetic; but, as there was no expectoration or cough, it was not given. On two or three occasions, a stomachic was given, which relieved him for the time. About five weeks since, while he was at the helm, the weather rather boisterous, requiring the exertion of much strength to steer the ship, all of a sudden, to use the man's own words, he felt a sort of tear or something giving way under the left clavicle. He came to the medicine-chest the next morning for medical treatment, complaining of pain and fulness of the left arm and shoulder, which was ascribed to muscular rheumatism. An embrocation was given, without relieving the pain or fulness of the left arm. An examination of the chest was now made. Just above the left clavicle, to the outside, there is a distinct thrilling tumour, of about the size of a walnut. The mammary veins are congested and prominent; the saphenous vein the same, as well as varicose, which the patient never observed before this morning. There is ecchymosis of the surface of the chest, and inflammation and enlargement of the left axillary glands generally; and diffuse inflammation of the skin at the inner part of the upper arm. He complains also of dysphagia; says that, on swallowing food or drink, something appears to be pressing on the gullet on a level with the clavicle. The pulse is rather vibrating and bounding, same at both wrists, about 68 per minute; tongue clean; bowels regular. He cannot sleep except by catch naps; nor lie on the left side, as it drags the neck. His appetite is bad. He was ordered perfect rest; tincture of henbane and spirit of nitric ether, with compound tincture of camphor, at night; and a light vegetable diet. Since the ship has lain at Calcutta, with the exception of being very depressed, the patient has remained much the same; the pulse in the right wrist sometimes failing. The medicine was occasionally altered; tincture of opium and compound spirit of ether being given, but only when the patient was exceedingly low. On Nov. 25th, he was seized with paralysis of the right side of the body and tongue, after which it was thought advisable to remove him to the hospital."

It was noted, on his admission, that the right side of the body was completely paralysed, so that he could not move a muscle, or feel the hardest pinching. The face was drawn to the left; the power of articulation was lost; the urine and fæces were passed in bed; respiration was laboured. There was purple discoloration of the skin and prominent veins in the left infraclavicular region; and swollen and varicose veins in the left upper limb and left side of the head. He had shooting pains in the left arm. The pulse at the left wrist was feeble; that in the left carotid just perceptible. His temper was irritable. There was dullness under percussion in the inner half of the left infraclavicular region; here also were found a distinct impulse and ringing cardiac sounds. The voice was hoarse, and there was some difficulty of swallowing. He was placed on strong beef-tea, milk, eggs, custard pudding, and port wine; and iodide of potassium, four grains three times a day, on Dec. 2nd.

Dec. 7th. It is stated, "the patient has somewhat improved; can raise the right leg a little; can speak one or two words; sits up in bed without support."

Dec. 8th. He was looking more lively than before; could move the right leg slightly; put out the tongue with less difficulty; articulated words more easily. There was slight pulsation in the aorta.

Dec. 16th. He protruded his tongue with perfect ease; he could raise the right leg, but had no power over the right arm. He had one stool. To-day an addition was made to his diet of a large loaf and a mutton chop.

Dec. 14th. Pulsation in the left carotid was increasing. He felt warmer in the right arm, and spoke much clearer.

Dec. 16th. The bowels were costive. He was ordered to have a cathartic enema.

Dec. 23rd. There was no pulsation in the left carotid. The sound over the aneurism was muffled, distant, and weak. No impulse.

Dec. 24th. The right arm still continued powerless; pressure over the nerves of the brachial plexus, at their exit through the vertebral foramina, caused pain. He put out the tongue perfectly well, and shut his eyes. There was no deformity of the face. He drew up the right leg with ease.

Dec. 28th. Feeble pulsation could be felt running up the course of the left carotid.

Jan. 8th. He had very severe pain in the stomach last night.

Jan. 9th. He felt very uncomfortable on lying down. The veins in the upper part of the chest were much more prominent. The pulsation in the aneurism was much about the same; respiration over it was bronchial.

Jan. 10th. He was sound sleeping on his back. He felt a little better to-day. Pulse rather weak; countenance cheerful. The venous congestion at the upper part of the chest was less; the pulsation of the aneurism was weaker. There was no pain in the stomach; no pulsation in the left carotid. He had one stool.

Jan. 15th. Strong rhonchal fremitus was heard in the left infraclavicular region.

Jan. 22nd. A herpetic eruption appeared at the neck and chest. He had difficulty of breathing; respiration in the right lung was healthy. He was ordered to have no medicine.

April 14th. During this interval he had had no medicine, and was supported on light nourishing diet. He had had bed-sores, which were healed. The impulse in the aneurism was greater. The bowels were regular. He was to have full diet, four eggs, beef-tea, milk, bread pudding, and port wine.

April 19th. He walked yesterday, supporting himself by merely placing his hands over the shoulder of the nurse, without any further assistance.

April 24th. Impulse over the aneurism had become ringing.

April 27th. Got up yesterday, and walked up, with help, to the next ward, and afterwards to the balcony, where he sat smoking, and was then helped back. Pulsation in the aneurism was feeble and more muffled; there was distinct pulsation in the right carotid. He had some (though very slight) power in the right arm. The pulse at the right arm was 76; the same at the left, both of the same strength. He slept well.

April 29th. The swelling in the chest had altogether disappeared. There was still some pulsation in the aneurism. He got out of bed last night without any assistance. He did not wet his bed last night, but got up to pass his urine.

May 17th. No pulsation could be felt in the right carotid. Ammonia liniment was ordered for the chest and arm.

May 21st. A little contraction of the biceps muscle could be felt by the hand; there was occasional starting of the same muscle when the forearm was shaken.

June 1st. He moved his fingers and arms for the first time.

June 9th. The inner half of the right infraclavicular region was prominent and formed into a tumour, tender on pressure of the stethoscope; the skin was œdematous and bronzed. The cardiac sounds were weak, but distinctly audible, though distant; there was no visible pulsation; but on succussion of the body, the tumour continued under the sternoclavicular articulation, for about an inch into the neck.

June 10th. Pulsation in the aneurism was distinct

today. Oedema of the skin over the tumour was very marked. The tenderness was considerable. The portion of the tumour in the neck advanced. No arterial sounds were heard under the left angle of the jaw.

June 11th. He was lying on the left side breathing suspiciously; the lips and nose were quite livid; respiration was stridulous. He complained of the hardness of the bed. The aneurismal tumour was more prominent, pointing, livid, and tender. There was a good deal of itchiness in the left leg. The bowels were not moved. On placing the palm of the hand on the swelling, it felt as big as an adult head.

June 12th, 6 A.M. The cooleys and the adjoining patients stated that, about an hour ago, the patient was sitting up smoking a cigar. Suddenly a gush of blood issued from his mouth and nostrils; and ere any notice could be sent to the officer on duty, he was dead. The quantity of blood lost was about half a quintalfull; i.e., about a gallon.

POST MORTEM EXAMINATION, about three hours after death. The body was cool; lying on the back with the legs extended. There was no cadaveric rigidity. The forearms and hands were covered with some patches of dried blood; as were also the left shoulder, the left angle of the mouth, and the left nostril. The bronzed appearance of the skin over the tumour had disappeared, and in its place was now observable a yellow mark. The prominence was less marked. The veins of the left shoulder and arm were tortuous and more marked than those of the right. There was no discoloration anywhere else. The superficial outline of the dulness of the tumour was of an oval shape, extending from an inch beyond the right sternoclavicular articulation to an inch or an inch and a quarter external to a perpendicular line from the left nipple in its longest diameter. Its short diameter extended from an inch and a half above the sternal articulation to a line between the nipples. The subcutaneous cellular tissue over the sternum and chest was infiltrated with a yellowish serosity, more considerable in the neck. On taking up the skin and muscle from the ribs, a reddish pulpy substance was found extravasated under them for about two inches, and the same breadth, corresponding to the second intercostal space. In the centre of this there was a rent, through which the index finger easily passed into a cavity in the chest, where it met with solid coagula about a quarter of an inch from the inner surface of the ribs. On taking out the finger a few drops of dark blood escaped. The right clavicle was not adherent to the aneurismal tumour. On opening the right side of the chest, the aneurismal tumour was found to project, smooth and shining, pushing the right lung away for about four inches beyond the right margin of the sternum. On opening the left side of the chest, the costal layer of the pleura was found to be thickened, and adherent firmly to the ribs. On opening this, the pleural cavity was found filled with a large clot of blood, pushing the lung towards the median line. A false membrane agglutinated the sternum and the costal cartilages. On proceeding further, the second left rib was found in a state of necrosis; and there was a gangrenous spot softened and broken down, through which the finger passed into the sac of the tumour. The tumour, so far as exposed now, was pear-shaped; its apex was connected with a fatty looking mass pushing down the heart. The heart was considerably displaced to the right, besides being pushed behind, lying evidently to the right of the vertebral column. The anterior mediastinum was occupied by fat, thicker than the omental fat, and forming a tumour two inches in breadth, four inches in length, and one inch in thickness; the pericardium was adherent to this, as well as to the heart within. On opening the right pleura at the upper part, the serum contained in it, separated from the clot, flowed abundantly to the extent of several pints.

The clot formed a regular coat of the interior of the pleural cavity, occupying the posterior and outer part chiefly, to the amount of some four or five pounds in weight. The compressed lung was adherent superiorly to the tumour. The liver was almost exsanguine. The tumour was not at all adherent to the vertebral column. The inner aspect of the right lung was connected by cellular adhesion near the root and at the edge of the upper lobe next to the middle, and to the whole of the free edge of the middle lobe; the latter rather more to the mediastinum than to the tumour. The left side of the opening at the apex of the chest was occupied by a thick granular fatty mass blended with muscular substance. The left common carotid formed a thick cord from the commencement in the arch of the aorta to its bifurcation into the external and internal carotids. Up to this point, it was completely filled with plugs of a fibrinous matter; but the two latter arteries were perfectly open. A blow-pipe introduced into the left subclavian passed readily on through the aortic arch. The right subclavian, the carotid, and the innominate arteries, were pervious. The tumour opposite the adhesion of the lower and inner part of the upper lobe of the left lung had another rent, which was evidently made by an unguarded cut. The thoracic aorta seemed to be dilated, thickened and pouched; its inner surface was rough and atheromatous, with a number of gaping openings. The pulmonary artery was quite healthy. The left ventricle was in a state of concentric hypertrophy, its muscular tissue being thick. The mitral valves were quite healthy. The aortic semilunar valves felt quite indurated, thickened, and roughened. The finger, on passing the orifice, entered the aneurismal sac, which felt like a jar, the point of the finger moving about in all directions in the wide cavity beyond. On passing another finger into the aortic arch through the slit formed in the descending aorta extending to the point of deflexion, the tip of this finger met the tip of the finger passed into the arch through the cardiac orifice; the whole of the space included between the two not measuring more than three inches, one of which was formed by the ventricle itself. From the base thus formed the aneurismal tumour extended upwards, forwards, and to the left and right, differentiated, however from the unaffected portion of the aorta by a constriction forming a bridge of about two inches. The interior of the aneurism was entirely filled by a compact mass of solid coagula, not less than two pounds in weight. The outer coat of the artery seemed to be continuous with the outer coat of the aneurism, except where destroyed by ulceration at the rents through which the blood had escaped. The coagula projected through these rents like masses of fungus hæmatodes. The trachea in the lower part of the neck was agglutinated with that portion of the aneurismal tumour which was formed by the innominate artery, by which it was so much pressed upon as to be a good deal narrowed, and, as it were, pinched. On passing the finger through the tumour, it was felt bulging into the interior of the trachea. On slitting open the trachea at the pinched portion above referred to, there was a hole through which the end of the blow-pipe entered into the sac of the aneurism. On opening the skull, the meninges were found quite healthy, having no abnormal adhesion nor thickening. The brain-substance, viewed externally, seemed to be quite natural and consistent. On slicing the substance of the cerebrum, no particular congestion of the white or grey matter was found. The appearance of the two sides was the same until the lateral ventricles were opened; on doing which, the choroid plexuses were seen to be in a state of dropsy containing cysts. The left optic thalamus was white and indurated; the right was light yellow, and softened so as to break down under the slightest pressure, its substance being of a pinkish yellow colour. The right corpus striatum was

also very soft. The arachnoid membrane easily broke down on pressure. The arachnoid lining of the left ventricle was thicker and tougher, and contained a rent, through which a purulent substance, perfectly diffuent, poured out. On cutting through this, the substance underneath was found to be infiltrated by the same sort of diffuent matter, and traversed by cellular bands in the substance of the corpus striatum. On exposing the whole of the diseased part, a cavity was found with very tough and rough parietes. The left communicating branch of the circle of Willis seemed to be three times as large as natural.

[To be continued.]

Original Communications.

SOME OBSERVATIONS ON APNŒA NEONATORUM.

By GEORGE GREAVES, Esq., Lecturer on Midwifery, Manchester Royal School of Medicine and Surgery.

[Concluded from page 36.]

I MUST now hasten on to make a few remarks on the treatment of children in whom respiration does not ensue immediately on birth. A large volume would not contain all the instructions given with this view, by writers, ancient and modern. A few of them only can be noticed.

Nearly all agree in forbidding the division of the umbilical cord until respiration is fully established. Some recommend us to wait until even the pulsation in the cord shall have ceased. These instructions both imply the belief, that fetal or intra-uterine life continues so long as the pulsations in the cord are felt; in other words that the breathing function of the placenta is performed, at least until that of the lungs is fully established, if not afterwards. If the reasonings in the former part of this paper are not incorrect, this opinion must be declared to be an erroneous one. It has, I think, been shown to be in the highest degree probable that the movement of the columns of blood in the vessels of the cord is permanently arrested at the moment of birth, if not before that event. But, granting this conclusion to be incorrect, if the communication between the child and the placenta, is to be maintained for the purpose of supplementing the not yet begun, or the still imperfectly performed, function of the lungs, it must be so maintained because the placenta still retains its power of action as a respiratory organ. But can we, with our present knowledge of the structure and functions of the placenta, and of the change which parturition must produce in its relations to the uterus, for one moment hold such an opinion? In an immense proportion of instances, the uterine contractions which expel the child detach the placenta in its whole extent. But even if a portion still remain adherent, the arteries which convey the blood of the mother into the sinuses of the maternal portion must, by the contractions which have extruded the child, have been entirely closed, and consequently the blood remaining in the sinuses must be venous blood, altogether incapable of effecting any vitalising changes in that contained in the fetal tufts. Therefore, supposing the current of blood to flow freely through the umbilical arteries, and the capillaries of the placenta, it must be returned by the vein unchanged. What, therefore, can be the advantage of maintaining a connection between the child and a placenta lying loose in the vagina, or if not altogether detached, retaining no arterial communication with the mother. The recommendation to maintain it can only be regarded as a lingering trace of the old-fashioned notions which attrib-

ted to the placenta some mysterious power of inherent vitality, notions which prompted the counsel to "put it into warm water and to sprinkle its maternal surface with a little ammonia and spirit," a prescription which to my amazement, I have found gravely repeated in the third edition of *Memoranda for Young Practitioners in Midwifery*, by the late Dr. Rigby, published in 1856.

Therefore, to preserve the connection between the newly-born and semi-inanimate child and an *effete* and almost lifeless mass such as the placenta has then become, whether we believe the circulation to continue through it or not, must at least be useless. But is it not positively injurious?

Will it not, in the first place, interfere with our efforts to resuscitate the child, and if the funis be at all shorter than natural, and the placenta be still wholly or in part retained within the uterus, endanger the mother by causing a risk of injurious jerks upon the cord?

But, secondly, what is our first duty in a case of delayed respiration? Unquestionably it is to sustain the action of the child's heart until it begins to breathe. Why then should we impose on the heart the profitless labour of sending the blood through the long round of the placental circulation, or even of attempting to make it go that round? By breaking the communication with the after-birth we on either supposition economise the child's strength.

But, thirdly, the retention of the communication between the child and the placenta must be in the highest degree prejudicial, by preventing the use of that mode of treatment which, of all others, I hold to be necessary for the resuscitation of a still-born child. If the delay in performing the first act of breathing, and the threatened extinction of life, be due to the enfeebled condition of the heart, and if that enfeebled condition be the consequence of an excessive degree of that which, at birth always to some extent exists normally, viz., the congestion of the aorta, caused by the cessation of the placental circulation, it is self-evident that the first step to the restoration of the balance of the circulation must be the removal of a portion of the load which oppresses the heart. This can best be effected by allowing bleeding to a small extent, from the divided extremities of the umbilical arteries. It is astonishing how small a loss of blood is sufficient for the purpose.

In a class of cases to which I have already referred, and which have so frequently a fatal termination, those, viz., in which the funis surrounds the neck so tightly, both as to prevent respiration, and impede delivery, I am in the constant habit of liberating the child by treatment which involves some loss of blood. If I can neither, without much force, slip the cord over the head, nor over the shoulders of the child, I divide the cord, and then somewhat expedite the delivery of the trunk. Bleeding to the extent of one, two, or three drachms, always occurs. Now if, as in the instance already referred to, the child's heart can be so oppressed as to be feebly beating forty times only in the minute, and yet the child when liberated from the vagina, can on the instant breathe, and cry, and move its limbs actively, can we doubt that this marvellously sudden change is due, in the first place, to the relief of the heart by the bleeding which takes place from the divided funis? In every instance then, in which a child does not breathe at birth, and in which it is not really and manifestly asthenic, from prematurity, innutrition, or disease, I would, after a pause of two or three minutes, advise that the cord be divided, and from one to three drachms of blood be allowed to escape before tying it. In cases of the apoplectic form of still-birth, more than this may have to be removed.

The next step must, of course, be to endeavour to excite respiration. Barely to enumerate the various modes of doing this, recommended by authors, would too much extend this paper, already too long. I can refer to two or three only. The use of the warm bath I believe to be