roboration of this view, that section of the ischiatic nerve in the frog, which contains, mixed up with the ordinary sensitive and motor fibrils, the sympathetic filaments which are distributed to the arteries of the limbs, was followed by dilatation of the arteries, with a fuller and more rapid circulation in the web. The blood in the capillaries and veins being, at the same time, unusually loaded with red corpuscles, the general effect to the naked eye was increased redness, not only of the web, but of the whole limb.* An eventual result was opacity of the web, indicating an altered state of nutrition.

In the cases related in the first part of this paper, the eyes, though seriously impaired in function, have not suffered disorganisation such as was observed in the animals subjected to the experiment of dividing the trunk of the sympathetic in the neck. In the latter cases, the influence of the sympathetic on the circulation in the eye was completely cut off. In the former, the injury to the sympathetic, from the concussion of the spinal marrow, has been such only as to impair and pervert its influence on the circulation in the eye. It is to be remarked that the subjective symptoms which first attract notice in such cases may exist for some time without any material alteration of structure being distinctly observable under the ophthalmoscope. It is also to be remarked, in conclusion, that the inability which the patients laboured under to exert their sight for any ordinary length of time, which accompanied the amaurotic failure of sight, was different from the common form of asthenopia. The inability to exert the sight was owing, partly, to the irritable congested state of the eyes, and was, partly, one manifestation, among others, of the impaired energy of body—sense and mind generally—which we saw to be a characteristic of all the cases which have been passed under review.

TWO FATAL CASES OF CONVULSIONS OF A PECULIAR CHARACTER.

By THOMAS DALTON, M.D., Llandudno.

I VENTURE to send for publication a short record of two cases of convulsions which have come under my observation during the last three years, as they seem to me to possess several features of interest: 1, in the suddenness of the seizure; 2, in the nature of the convulsions; and, 3, in the apparent uselessness of all remedial measures, at least of such as were tried. As the cases are very much alike in their leading characteristics, I propose to give the history of one somewhat in detail, and then to mention any important points of difference observed in the second case.

CASE I.—The patient was a boy aged nine. He was small for his age, but appeared to have enjoyed uniform good health. He had never been known to have convulsions of any kind. His parents were poor, but he had been adopted by the persons with whom he was living at the time of the attack. He had been with them for about three weeks, and during that time had eaten voraciously of food to which he had not been accustomed—chiefly meat and pastry. He had appeared to be in perfect health till the day I was sent for. He went to bed quite well the night before, but about four o'clock in the morning he awoke complaining of great pain in the stomach; after having rather a large dose of brandy and water, he went to sleep again; about nine he awoke, and almost immediately afterwards “had a fit.” When I arrived, the patient was in bed, and was just beginning with a convulsion, apparently of an epileptic character. He was immediately put into a warm bath with some mustard in it. The convulsion soon passed off; the patient was put to bed again; a bladder of ice applied to the head, and a powder of calomel and jalapine given. When I called again, in a little more than an hour, I was told that the convulsions had returned, and that they came on very frequently. I now saw that they had changed in their character, for during the attack the patient presented very much the appearance of one suffering from tetanus, save only that he was insensible both during the attack and the interval. After the paroxysm passed off, he remained quiet for about ten minutes, and during that time the pupils were natural and quite sensible to light; he then began to breathe quickly (the respirations often amounting to 50 per minute); the pupils became fully dilated and the eyes fixed; there was slight mus-

cular twitchings of the arms and legs; next, the sterno-mastoid muscles became rigid; the rigidity soon extended to the muscles of the limbs and back, so that there was complete opisthotonos; the arms and legs were semiflexed, and the thumbs bent in on the palm. There was no foaming at the mouth, but the tongue was protruded, and the jaws clenched so firmly that it was with the greatest difficulty any thing could be kept between the teeth. During the paroxysms, respiration was almost in abeyance, there being merely an occasional sobbing gasp. This state of spasm usually lasted from one to two minutes, then it went off quite suddenly, and all the muscles were almost instantly and perfectly relaxed. Though unconscious, the patient was very susceptible of any noise or motion in the room; in fact, a paroxysm might at any time be induced by merely shaking the bed, or still more certainly by making any attempt to get him to swallow. The symptoms continued much the same till death, which took place about ten o'clock next morning, or about twenty-four hours after the first attack. I should mention that the bowels were freely moved during the night, and that for the last two hours of his life there was a very loud churning sound in the abdomen during the paroxysms. A *post mortem* examination was made the same afternoon by Dr. Nicol and myself. We examined the head, thorax, and abdomen, but not the spinal cord, as the friends, unfortunately, objected. All the organs appeared perfectly healthy. The only approach to any morbid appearance was in the brain, the whole substance of which was somewhat soft and friable, but there was no true softening of any particular part—no congestion and no effusion. On examining the stomach and intestines, we found that they contained a very large quantity of bile; in largest quantity in the small intestine. There was not a trace of any undigested food or feculent matter; in fact, the bilious fluid formed the sole contents of the intestines.

CASE II.—In this case, the patient was a little girl aged eight; not naturally robust, but generally enjoying fair health. She had been languid and heavy the day before, but in the evening seemed better. When I first saw the child, she was cold, pale, and collapsed, with a weak laboured pulse of only forty. She had been put into a warm bath before my arrival, and I was told that the fit had lasted about five minutes. I had her put to bed immediately, and gave her a little brandy and water, which she swallowed; the pulse soon improved, and she presented the appearance of a child after an ordinary epileptic fit. I then left, promising to call again in three or four hours. On my return from visiting a patient in the country, I found that my partner, Dr. Nicol, had been called to the patient, as the convulsions had returned. The pulse was now 120, and the convulsions of a different character. It struck both of us that the case was likely to prove similar to that just narrated. Our fears turned out to be but too well founded, for the disease followed almost an identical course both in its progress and results, except that in this case the child lived longer (forty hours) after the first attack.

I must now say a few words regarding the treatment adopted. In both cases we tried warm baths in the first instance, then ice to the head and spine (by means of Chapman's bag); at first this seemed to be of use, especially in the first case, but it soon lost its effect, and indeed, after a time, it seemed to do positive harm. We next had recourse to chloroform, and certainly, as a *palliative*, with most satisfactory results. If administered in time (*i.e.*, as soon as the breathing began to be hurried), it entirely prevented the spasm, but if a little longer delayed, it seemed to hurry on the attack, and to render suffocation more imminent; in fact, the symptoms it produced were at first rather alarming, but we found that, when persevered with, the spasm was overcome in a few seconds, and breathing resumed quite naturally. It was a remarkable fact, that in the second case the pulse invariably became stronger, slower, and more regular, whenever the chloroform was given. The administration of the chloroform was kept up in this case, by Dr. Nicol and myself, without intermission, for sixteen hours, about five ounces of chloroform being used. During this time there were only half a dozen decided spasmodic attacks. However, greatly to our disappointment, as soon as it was given up, the attacks returned just as frequently and violently as before. We next determined to try the subcutaneous injection of atropine, still giving the chloroform when a paroxysm was threatened. The first time I injected about $\frac{1}{10}$ of a grain; but, as this had no apparent effect, in about two hours I injected again, increasing the dose to about $\frac{1}{5}$ of a grain. This seemed to do some good, for the patient soon became very quiet, the breathing regular, and there was no sign of spasm for upwards of three-quarters of an hour. At the end of that time the spasms returned; and though the injection was again tried, it entirely failed. I should mention that in this case (the second) the bowels were relieved by means of an enema, the long tube being used. The motion was copious, dark, and offensive; afterwards the strength was kept up by means of enemata of beef-tea and port wine.

* In 1852, Dr. Claude Bernard, in repeating the old experiment of cutting the sympathetic nerve in the neck of a cat or rabbit, discovered that, in addition to the effects on the pupil and on the circulation in the eye previously known, there supervened redness and heat of the ear and side of the head. Dr. Brown-Séquard, having cut the sympathetic in the neck, galvanised the end of the nerve above the section, and found that the increased redness and heat of the ear and side of the head were thereby diminished. This effect was owing to constriction of the arteries, in consequence of their circular muscular fibres having been excited to contraction by the stimulation to which the sympathetic was subjected by the galvanism.

In conclusion, I shall merely remark that in both cases I should have supposed the disease was idiopathic tetanus, but for the insensibility of the patient, and the complete relaxation of the muscles after the spasm was over. It was also, I think, remarkable that, in both cases, the convulsions were, *in the first instance*, of an ordinary epileptic character.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

BIRMINGHAM GENERAL HOSPITAL.

A CASE OF INHERITED SYPHILIS, WITH INTERSTITIAL KERATITIS AND REPEATED ATTACKS OF LARYNGITIS. A CASE OF APHTHOUS INFLAMMATION OF THE MOUTH, EPIGLOTTIS, AND LARYNX.

(Under the care of JAMES RUSSELL, M.D., F.R.C.P.)

THE two cases which follow have nothing in common, excepting that in each the larynx participated in the general disease; but each presents particulars of interest.

CASE I.—J. K., aged 12. The father is admitted to have suffered from some venereal affection; he was transported, and died abroad. The mother, also, is stated to have had venereal disease. Their first child was born at eight months, and died a month afterwards. The second child lived four months, and died of inflammation of the bowels. No evidence of syphilitic infection was obtainable in either case. Our patient was the third child; one other died in the workhouse, of general wasting.

J. K. had sore eyes two days after birth; "they looked, under the lids, all like blood." They recovered by the help of some drops; but they again became "bad" after the measles, at the age of five, and have been subject to recurring attacks of inflammation ever since. Four years ago, he suffered from hoarseness and croupy cough; and, at various periods subsequently, the laryngeal inflammation has returned with increased severity. At his admission, the boy was affected with acute laryngitis of such severity that it seemed probable that tracheotomy would be required; but, under the influence of small doses of tartar emetic, with iodide of potassium, counterirritation, and steaming, the laryngeal symptoms subsided—so slowly, however, that, at the end of three weeks, the voice was a mere whisper, and the cough had occasionally a croupy sound. The patient never expectorated.

The boy is well made. The bridge of his nose is obviously flattened, though not sufficiently to constitute an absolute deformity. During the early period of his residence in the hospital, there was a mucous discharge from the nose. His complexion, though pallid, was clear. His two middle upper incisors manifested a decided tendency to the peg-shape, but were not notched. The glands of the neck were not enlarged. The right cornea was very opaque from interstitial deposit, and was surrounded by a dense zone of injected vessels; the left presented one or two spots. His epiglottis was so remarkably prone, that we only succeeded on two occasions in obtaining a transient glimpse of the interior of the larynx. We could just perceive general thickening of the lining membrane.

The patient remained in the hospital more than three months, and left with considerable hoarseness. During this period, an abscess formed over the larynx, and was attended with a remarkable amount of subcutaneous thickening; which, however, had nearly disappeared when he left. He was treated with steel, iodide of mercury, cod-liver oil, and good diet.

CASE II.—S. C., aged 59, was admitted in a state of extreme exhaustion, and almost in the last stage of emaciation, yet without affording evidence of any specific cachexia. He had no cough; but his voice was somewhat hoarse, and was reduced to a mere whisper. He suffered severe pain in swallowing, especially at the termination of the operation. The region of the larynx was free from tenderness. The tongue was covered with a thick coating of dirty-coloured fur; and the fauces were filled with sticky mucus, which he cleared away with much difficulty. Irregular patches of bright red vascularity covered the soft palate, surrounding groups of small aphthous ulcers, each the size of a millet-seed. The uvula was puffy. The gums were thickly speckled with minute yellow dots, the lower more abundantly than the upper; and were very vascular, but not spongy. Amongst the specks were one or two ulcers of the size of a split pea; two similar ulcers were observed

on the tip of the tongue; and the left angle of the mouth was superficially ulcerated. The laryngoscope exhibited the edge of the epiglottis of a brilliant red, and studded with aphthous ulcerations; its laryngeal surface also was very vascular. The interior of the larynx was free from swelling; but, just above the left vocal cord, a streak of a bright red colour presented itself. The anterior extremities of the vocal cords were also injected; but, except that their surface appeared somewhat spongy, they were healthy in other respects. It appeared that the loss of voice was chiefly due to an instinctive fear of effecting the necessary approximation of the vocal cords, in consequence of the general tenderness of all the parts concerned in the process.

The history which the patient gave simply amounted to a recital of something nearly approaching to starvation, protracted through the last twelve months, during which period the poor fellow had endeavoured to maintain himself and wife on wages not exceeding eight shillings a week, and latterly amounting only to five, out of which three shillings were paid for rent. The illness described above was of a fortnight's duration.

His treatment consisted merely of good diet and tonics, under which he rapidly improved, though his voice continued husky for more than a month.

DEVON AND EXETER HOSPITAL.

LIGATION OF THE AXILLARY ARTERY.

(Under the care of Mr. DE LA GARDE.)

MARCH 30th, 1869.—A. N. of Yeoford, aged 36, was run over by a locomotive, which cut off her left arm above the insertion of the deltoid. The humerus was splintered. There was skin enough, but it was thin, and bruised. Two large nerves, and the brachial veins, hung down loose, but the artery had retracted deeply. She lost a great deal of blood at the time, and was still very faint when she arrived at the hospital.

Mr. Delagarde waited three hours until she rallied. He was disposed to amputate at the shoulder, that he might reach the artery where quite sound; but this, though a simple operation as performed by him in several cases (see BRITISH MEDICAL JOURNAL, Sept. 21, 1867), is commonly regarded as formidable, and he was advised to leave the joint. Having, therefore, removed the more damaged integument, he sawed the bone an inch below the tuberosities, cut off the nerves and veins, and, seizing the artery, higher up, with his finger and thumb, drew it down, and, with difficulty, had it tied. The vessel, however, was full of blood, and beat at the spot. Chloroform was used, but it made her alarmingly faint.

A good deal of sloughing, chiefly of the flaps, ensued. Carbolic acid poultices were applied, with balsam of copaiba when the lymph began to organise. She had sherry, and, after April 5th, ale and full diet. She gained strength, the sloughs separated, and the wound was filling with granulations, when, on April 8th, early in the morning, whilst asleep, she bled so profusely that it was hard to revive her. Compression was made behind the clavicle, and there was no more hæmorrhage.

At 4 P.M., she had so far recovered that Mr. Delagarde tied the axillary artery. Her pulse was so feeble that ether-spray was used instead of chloroform. He divided the frozen skin close on the pectoral side of the cephalic vein, opening an abscess in which lay the ligature, and the sloughy end of the artery. The sawed end of the humerus was then held up, and, passing his finger under the tendon of the pectoral muscle, he divided it, and exposed the contents of the axilla. There were lymph deposits, but the artery, otherwise, seemed healthy, and was beating freely. Disconnecting it from the nerves and veins, he carried a fine ligature under it with Weiss's aneurismal needle, and then drawing in a stouter ligature (fearing the finer might cut the artery), tied it.

She bore this operation well. Every thing was done to support her, and she went on favourably until April 10th, at noon, when considerable hæmorrhage recurred. It was determined, if she were sufficiently restored, to tie the subclavian, but she died in an hour and a half without further loss of blood.

Mr. Delagarde tied the axillary rather than the subclavian artery, because the operation was less severe, was more easily done, and was well outside the trunk. Besides, this was the left side, and the artery was so unusually lapped over by the clavicle, that the bow of a key could scarcely be pressed down, and it is doubtful whether a ligature could have been put round it without dividing the bone. In the exhausted condition of the patient this would have been unjustifiable, except as a last resource.