

## A Mirror OF 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.

### UNIVERSITY COLLEGE HOSPITAL.

#### A PLUM-STONE LODGED IN THE LEFT BRONCHUS; TRACHEOTOMY; EXPULSION; RECOVERY.

(Under the care of Mr. MARCUS BECK.)

THE following case, for the notes of which we are indebted to Mr. D. Farnell, house-surgeon, presents several points of clinical interest. The foreign body, which was at first arrested in the larynx, became dislodged, passed down the trachea, and apparently fixed itself in the left bronchus. Although the latter is a less common situation for foreign bodies than the right bronchus, it is not so rare as is frequently imagined. Professor Gross has analysed twenty-one cases in which death took place without operation and without expulsion of the foreign body, and in eleven cases the foreign substance was in the right bronchial tube, and not once in the left bronchus. But in forty-two cases subjected to operation or general treatment, the foreign body "was situated twice positively, and eleven times probably, in the right bronchial tube; four times certainly, and four times probably, in the left bronchial tube." In the analysis of 166 cases by M. Bourdillat, the foreign body was situated twenty-six times in the right bronchus, and fifteen times in the left bronchus. In the following case the physical examination of the chest showed almost beyond doubt that the plum-stone was arrested in the left bronchial tube. The movements on the left side of the chest were greatly diminished, the percussion-note impaired, and the breath-sound weak and distant. In a short time there were evident signs of collapse of the whole of the left lung, accompanied by a stridulous sound over the left bronchial tube. The explanation of this condition is that during the inspiratory act the extraneous body was driven into the bronchial tube, so as to prevent the passage of air into the finer bronchi, although it did not prevent the expulsion of air during expiration. The mischievous effects were aggravated as time went on, owing to the increase in size of the offending body by the accumulation upon it of thickened mucus. The speedy expulsion of the body after tracheotomy and the passage of the wire down the trachea, by which a violent fit of coughing was induced, is worthy of notice, and is full of encouragement.

Louisa K—, aged nine, at 10 A.M. on Sept. 5th, was eating a damson while she was running up a hill, when suddenly the stone of the damson slipped down her throat. She managed to reach home, a distance of about sixty yards, where she arrived in a helpless state, and suffering from violent and almost incessant paroxysms of coughing, which lasted about two hours. A medical man who was called in stated that he was at first able to feel the stone in the larynx with his finger, but that the stone had subsequently slipped lower down. An emetic of mustard and warm water failed to move the stone, although it induced free vomiting. At 5.30 P.M. the child was admitted into the hospital. Although the face was slightly cyanotic, the little patient was in no great distress. The breathing was 38 per minute. The *alæ nasi* were working. The patient was perfectly conscious, and answered questions rationally, though in a voice not above a whisper. She pointed to her throat as the seat of pain. There was more movement of the right than of the left side of the chest; the cardiac impulse was seen as high as the second left intercostal space. The percussion note was good over the whole of the right chest, but there was deficient resonance over the whole of the left chest. Breath sounds were harsh over the right, weak and distant over the left side; bronchial over the left lower lobe. At 7 P.M. Mr. Marcus Beck saw the patient, when the condition was the same as on admission. Inversion and succussion were tried without success.

Sept. 6th.—The child had passed a quiet night, but did not seem so well this morning. The cyanosis was a little increased, and the breathing more difficult. There was no paroxysmal cough or dyspnoea. Physical signs same as yesterday. Dr. Sydney Ringer was called in consultation. He considered there was collapse of the whole of the left lung, and he detected a stridulous sound over the left bronchus, and agreed with Mr. Beck, that there was some foreign body in the air-passage, probably in the left bronchus, causing great obstruction to the entrance of air into the left lung, and that it was advisable to take immediate steps for its removal. Accordingly, at 1 P.M. the patient was placed under the influence of chloroform, and an incision about two inches long was made in the middle line down to the trachea. The isthmus of the thyroid and some small vessels, one of which was ligatured, were divided by the incision. The larynx was then held up with a sharp hook, and four rings of the trachea, together with the cricoid cartilage, were cut through, and the sides of the trachea held apart by means of blunt hooks. Mr. Beck then passed a loop of strong steel wire, curved at the end, through the wound, down the trachea, in the direction of the left bronchus. The procedure induced violent coughing, and a damson-stone of ordinary size was ejected, coated with thick mucus. Two fine silver stitches were placed in the skin at the lower end of the wound, and a pad of gauze placed over the open air-tube. The patient was placed in bed, and the temperature of the room was carefully maintained at about 68° Fahr. At 10 P.M. the patient was easy, had been very quiet, and had taken milk freely. She breathed through the mouth and the tracheal wound. The left side of the chest was less retracted, and the dullness at the apex and at the root of the left lung had quite disappeared. The resonance over the lower lobe of the left lung was still impaired. The breath sound was vesicular throughout the upper lobe.

7th.—1.30 A.M.: Temperature, 101°; 4 A.M., 100.8°; 8 A.M., 100.6°.—11.45 A.M.: Temperature 103.0°; pulse 166; respiration 51. Sweating freely; face flushed.—4 P.M.: Temperature 102.4°; pulse 164; respiration 56.—10 P.M.: Temperature 102°; pulse 150; respiration 47. There was still less movement of the left side than of the right. There was no expansion of the left base, the respiratory movement being entirely elevatory, and the intercostal spaces very close together. The percussion note was good over the left front; there was vesicular breathing at the left apex, and weak vesicular breathing at the angle of the scapula, while just opposite the fifth vertebra there was faint tubular breathing.

By the 11th of September the collapsed and pneumonic condition of the left base had entirely disappeared; the temperature was normal. On the 14th of September the physical signs of the whole chest were those of health; and upon the same day air ceased to pass through the opening in the trachea, and the edges of the wound were granulating freely. On September 25th the skin had quite healed. The patient was discharged from the hospital on October 1st, perfectly well.

### ST. GILES'S INFIRMARY, CAMBERWELL.

#### TRAUMATIC TETANUS; RECOVERY.

(Under the care of Mr. THORBURN PATERSON.)

IN the treatment of no disease have more unsatisfactory and uncertain therapeutic results been obtained than in that of tetanus. There is scarcely a drug that has not at one time or another been lauded as a specific for the cure of this distressing malady. Mercury, opium, morphia, atropine, conium, bromide of potassium, iodide of potassium, chloral hydrate, Calabar bean, Indian hemp, tobacco, woorara, iron, quinine, and brandy, have each and all at one time or another been recommended as all but certain curatives of tetanus. Hot baths and cold baths, electricity and galvanism, rest and exercise, the application of steam and of ice-bags, have in turn been advanced and extolled as never-failing cures. The amputation of a limb or the division of a nerve has also been earnestly advocated. Yet every one of these drugs, applications, and modes of practice has been attended by at least as many failures as successes. This will continue to be so till by careful observation and experimentation we shall have acquired an exact knowledge of all the condi-

tions which combine in a given case to produce tetanic spasms—till we know what are the ultimate molecular changes in nerve and muscle and the altered relations between blood and tissue which exist in and determine the tetanic state. Endless and contradictory have been the pathological explanations of tetanus. Inflammation of a nerve, irritative overgrowth within the neurilemma, degenerations in the spinal cord, hæmorrhage, hyperæmia and softening, the presence of bacteria in the nerve and cord, a septic poison in the blood, have each been alleged by some, and denied by others to be the fundamental cause. Until we know what is the essential cause of tetanus, or what is the exciting or determining cause in a given instance, it is evident that we cannot arrive at a cure for tetanus by purely *a priori* reasoning. But every case is of interest, and has its value, whether the ultimate result be death or recovery.

C. R.—, a French-polisher, aged twenty-five, was admitted on May 2nd. About ten days previously a boot-nail pierced the big toe of his right foot. The sore became inflamed, and he applied poultices. Three days before admission the patient felt a stiffness in his jaws, and this stiffness gradually increased in intensity, afterwards attacking the lower limbs, and then the back and the neck. The stiffness was accompanied by an occasional spasm, which was most marked in the upper part of the thighs.

On admission the patient had the symptoms of a severe attack of tetanus; the jaws were firmly closed and immovable, the thighs and legs were extended and rigid, the feet strongly inverted, as in talipes varus, the trunk arched backwards, and the recti abdominis muscles were hard and rigid, and there was an occasional spasm of the muscles of the thighs and back. The patient had partial control over the muscles of his upper limbs from the elbows to the fingers. The pulse was quick and full, the respiration hurried, and accompanied occasionally with a sigh. Now and then profuse perspiration broke forth on the patient's face. The bowels were constipated and the urine was scanty. On the big toe of the right foot there was a small sore, apparently the result of a punctured wound, which was seemingly healing. Fortunately the patient had lost a front tooth, and by the space thus afforded the administration of food and medicine was made easy, especially as there was no difficulty in swallowing. The patient's intellect was perfectly clear, and his speech such as is produced when the jaws are firmly clinched and the lips kept rigid. A purge was ordered, and a mixture containing tincture of Indian hemp and liquid extract of ergot was given every four hours. Chapman's ice-bag was also applied to the spine, and a liberal diet of milk and beef-tea allowed.

May 3rd.—The opisthotonos was more intense, and the other symptoms were more severe. The feculent matters passed after purge were dark and offensive; urine scanty, high-coloured, and of sp. gr. 1026. Indian hemp and ergot continued.

4th.—Urine examined and found to contain a large quantity of triple phosphates and lithates. The phosphate crystals were extremely large. Ordered four ounces of brandy daily.

5th.—Symptoms still more severe. Pulse 140, and full; respiration 28; perspiration profuse; muscles of abdomen rigid, and back intensely arched. Patient did not complain of pain except in the calves of his legs, which were extremely rigid. The ice-bag distressed the patient, and he thought it increased the occasional spasm before mentioned. The Indian hemp mixture was discontinued, and one-tenth of a grain of extract of Calabar bean was given every hour.

6th.—As the ice-bag caused great distress it was discontinued. Up to this time there had not been the slightest abatement in the severity of symptoms.

8th.—Pulse 120, firm and full; respiration 22; perspiration profuse; urine still scanty and high-coloured. Patient could move his jaw to the extent of one-eighth of an inch, and his feet were in the slightest degree less firmly contracted.

9th.—Citrate of lithia (forty grains in the twenty-four hours) ordered along with the extract of Calabar bean.

18th.—From the 10th to this date there has been a gradual and perceptible amelioration of all the symptoms. After the citrate of lithia was combined with the extract of Calabar bean the urine greatly increased in quantity, and the perspiration diminished. The phosphate crystals were still present in the urine; but the size, as seen under the

microscope, was only one-sixth or one-eighth of what it was at first. On this day also there was observed abundant desquamation of the skin, and some small blebs, like those of pemphigus, on the backs of the hands. There was still marked opisthotonos, and the abdomen was prominent and rigid; but the respiration was easier, being 19, and the pulse 122 and soft.

21st.—Continued improvement. Patient for the first time complained of pain at the nape of the neck. Blister applied to seat of pain.

23rd.—Patient was free from pain, and was able to turn his neck a little. He could bend his knees slightly, and could separate his jaws so far as to allow his tongue to be partially protruded. Tongue clean. All along, the Calabar-bean mixture had been given every hour while the patient was awake, the dose of the extract having been increased from one-tenth to three-twentieths of a grain. (It may here be remarked, although it has not been entered in the notes at the bedside, that soon after the extract was begun the patient suffered less from that convulsive spasm of his muscles of which he most complained. It is to be noted, however, that this was simultaneous with the desisting from the application of the ice-bag.) On the 23rd one-fifth of a grain of the extract of Calabar bean was ordered every four hours, along with hyposulphite of soda and tincture of hemlock.

27th.—Toes still arched inwards; legs not quite so stiff; general improvement in other symptoms. Ordered a warm bath; and a blister to be applied to the nape of the neck.

28th.—Patient able to eat solid food.

29th.—Can raise himself in bed, and get into a chair by supporting himself on the edge of the bed.

June 5th.—Patient able to walk with only slight support. The feet are still slightly inverted, and the big toes flexed. The jaws can be separated about three-quarters of an inch. Patient weighs 9 st. 5 lb.

8th.—Calabar bean discontinued, and hypophosphite of soda ordered.

13th.—Still considerable stiffness of the neck. Another blister to be applied to the nape.

30th.—Weight 10 st.

July 4th.—Patient had continued to improve. The stiffness of the neck was quite gone; the muscles of all the limbs were quite normal and under perfect control of the will; the rigidity of the abdominal and spinal muscles was quite gone; and there remained only a stiffness, or rather sensation of stiffness, in the jaws. Discharged cured. Throughout the disease the patient's mind had been perfectly clear.

Oct. 4th.—The patient was perfectly recovered, and stated that he was in the best possible state of health.

In this case Mr. Paterson, in the first instance, tried Dr. Chapman's ice-bag (although with no agreeable result), on account of his having treated with the most marked success a case of idiopathic tetanus in the Liverpool Workhouse Infirmary in 1868. That case was treated with the ice-bag alone, and was cured in about seven days. In Mr. Paterson's note-book the symptoms of that case were thus described: "The convulsions were of a paroxysmal character, and the paroxysms varied in duration from one to three or four minutes. During the intervals the patient continued unable to speak, although he could express by signs that he understood what was said to him. The power of deglutition was almost gone. He complained of great pain and dryness in the throat, and kept continually moistening his lips with water." His other symptoms were those of severe opisthotonos. It will be seen that in many respects there is a considerable difference in the symptoms of that case and the present case of traumatic tetanus. The sensations of the patients respectively in the two cases, on the application of the ice-bag, were markedly different, the ice having the most soothing effect in the one case, and causing the greatest distress in the other.

## BELFORD HOSPITAL, FORT WILLIAM, N.B.

### CASE OF MORBUS COXÆ; CURE.

(Under the care of JAMES W. ALLAN, M.B., C.M.)

IN the following case the value of absolute rest in the treatment of joint disease, and especially of hip-joint disease, is well illustrated. Enforced rest for a few weeks