collecting beneath it; but the false vocal cords, composed of much looser tissue, are very liable to suffer, and, by their swollen condition, take their share in preventing the apposition of the true cords, and in damping their vibrations. I make no more special reference to acute laryngitis, as I have no examples of this disease to bring before you.

In examining the larynx in chronic inflammation, we see the arytenoid cartilages more or less erect, and the glottis on this account more or less closed, and incapable of opening; the posterior edge of the larynx much thickened and irregular; the apices of the arytenoid cartilages prominent; and the lining membrane tumefied; in one of the following cases it was also remarkably granular. The mucous membrane may be preternaturally vascular and bathed with secretion, or it may retain its normal colour and dryness, according as the surface of the membrane is or is not affected by the inflammation. If the epiglottis be involved, it is thickened, contracted, and recumbent, or considerably everted, or even ulcerated.

I may mention ulceration of the vocal cords as another important cause of loss of voice. The mode in which it operates to produce this effect does not require further explanation. Mr. Ryland states (*Diseases and Injuries of the Larynx and Trachea*, p. 103) "if this occur on one side only, the voice is rendered very hoarse and rough, but some degree of vocal resonance remains; but, if both ligaments be destroyed or much injured, the voice is absolutely extinguished."

[To be continued.]

Clinical Records.

BY

HENRY LEE, Esq., F.R.C.S.,

SURGEON TO ST. GEORGE'S HOSPITAL.

XII.—RADICAL CURE OF UMBILICAL HERNIA.

WM. NICHOLS, aged 50, was admitted into St. George's Hospital, under the care of Dr. Bence Jones, in 1861. He left the hospital supposed to be cured at the expiration of six weeks. Soon after this, he found a protrusion at the navel, which gradually increased, until he was admitted a second time into the hospital, on December 16th, 1862.

Upon examination, an umbilical hernia was found, causing a swelling rather larger than a hen's egg. The swelling could with some little difficulty be reduced, but it always returned upon his assuming the erect position. For some time past, the swelling had occasionally become very tense, and remained in that condition three or four days together, causing him much pain, and preventing him from following his occupation.

Dec. 17th. The patient was brought into the operating theatre. The hernia was found full and tense, but was completely reduced after some little difficulty. The tumour was then grasped between the thumb and finger, and three needles were passed through its neck, from side to side, close to the abdominal ring. The collapsed sac was allowed to hang down, and twisted sutures were placed, with moderate firmness, over the extremities of the needles. The patient was then sent to bed.

Dec. 20th. He felt rather low; there was no other symptom. Three ounces of gin were ordered.

Dec. 23rd. The sac felt as if completely consolidated. The needles were removed.

Dec. 24th. He felt quite well, entirely free from pain.

Dec. 27th. No impulse was communicated on coughing to the remains of the sac, which was shrivelling up.

Dec. 29th. He left the hospital apparently cured.

This patient called at the hospital on February 3rd, and on subsequent occasions. There was no return of the hernia; and the skin which had covered the sac, gradually became converted into a dry, dark, warty looking substance, not larger than half an ordinary nut.

Several other cases of umbilical hernia of smaller size, in children, have been recently successfully treated in St. George's Hospital in the manner above described.

Illustrations

OF

HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

ST. GEORGE'S HOSPITAL.

CASES OF COMPRESSION OF THE BRAIN, IN WHICH THE OPERATION OF TREPHINING HAS BEEN PERFORMED: WITH REMARKS.*

By THOMAS P. PICK, Esq., late Surgical Registrar.

THE injuries of the head, in their relation to operative surgery, is a subject of such vast importance to all practical surgeons, that I have thought a narration of some of the cases which have occurred in this hospital during the last few years might be of interest, and might tend to confirm us in our views of the recognised and orthodox treatment, or suggest some other.

Compression of the brain from injury, requiring the use of the trephine, may arise from three causes: 1. Extravasation of blood; 2. Depression of bone; 3. Effusion of the products of inflammation. It will be convenient, for the sake of order, to classify our few cases under these three heads.

I. *Extravasation of Blood.* Of the first class of cases—viz., *trephining for extravasation of blood*—no instance has occurred during the last few years in the wards of this hospital. They are, however, of the highest importance, not only on account of the great difficulty of diagnosis as to the seat of the effusion, but also on the success which attends the treatment, if resorted to early. One of the chief points to be attended to, in coming to a correct diagnosis with regard to these cases, is that they are usually complicated with fracture of the skull. Of thirty cases, collected at random from the *post mortem* records of this hospital, of extravasation of blood between the bone and dura mater, there was extensive fissure in every case.

II. *Compression of the Brain from Depressed Bone.* The fracture may be simple or compound; may be accompanied by symptoms, or not. Of cases of simple depressed fracture without symptoms, Sir Astley Cooper says: "Intracranial suppuration does not often occur as long as the depressed fracture is covered by integument"; and undoubtedly this is often the case, though Guthrie appears to differ from this view; and cases sometimes occur in which this takes place, as, for instance, the following case.

CASE I. Michael M., aged 25, labourer, was admitted August 9th, under Mr. Henry Lee. Half an hour before admission, he fell down an area, striking his head. He was drunk at the time. When admitted, he was so intoxicated that it was impossible to diagnose what

* From a paper read before the St. George's Medical Society, 1862-63.

head-symptoms there were. The following morning, he was quite quiet, and answered questions rationally. A depression of the occipital bone was felt to the extent of half an inch, to the left of the external occipital protuberance. The pupils were natural, and sensible to light. Pulse quiet; tongue clean. The bowels had acted. He was ordered to have ten grains of calomel immediately, and a senna draught in two hours.

August 11th. He complained of great pain in the head, and was very restless. There was slight facial paralysis of the right side. The pulse was 66, throbbing; the tongue furred; the pupils dilated and sluggish; the bowels acted freely. Symptoms of inflammation now developed themselves; convulsions and symptomatic fever, followed by coma and death on August 24th, thirteen days after the accident.

At the *post mortem* examination, pus was found in the cavity of the arachnoid, and an abscess in the substance of the brain.

In cases of compound depressed fracture without symptoms, the trephine must be applied to prevent impending mischief. The fracture is not here covered by integument, and therefore intracranial suppuration will more probably occur.

CASE II. George Keally, aged 50, was admitted October 20th, 1859, under Mr. Johnson. A short time before admission, whilst working at a mill, he was struck on the left side of the head by the shaft, knocking the opposite side against a wall. On admission (5.30 p.m.), he was quite sensible, and gave an account of the accident. Pulse 60. The pupils acted, and were regular. There was a lacerated wound on the left side of the forehead, leading down to a fracture of the skull, the bone being comminuted and depressed. There was a long ragged scalp-wound over the right parietal bone, at the bottom of which the bone was exposed. There was no fracture detected on this side. The depressed portions were removed by means of Hey's saw and the elevator. The dura mater was uninjured.

October 21st. He had passed a quiet night, and was in little or no pain. There had been no bleeding. He was quite sensible, and the pupils acted. Pulse 72, full. He was ordered to have three grains of calomel immediately, and a senna draught in four hours.

October 22nd. The bowels acted copiously after the draught. He had been quite quiet, and slept a little. The wound was discharging laudable pus. Pulse 86, full; tongue white at the edges.

October 23rd. He had been very restless all night, with constant twitching of the muscles of the face. He complained of great pain in the head; was constantly moving in bed, and throwing his arms about. He was quite sensible. There was paralysis of the left side of the face. The left pupil was somewhat larger than the right; both acted. The face was flushed; the skin hot; pulse 86, full; the tongue was furred. He was ordered to have three grains of calomel every four hours, and to have a blister applied to the nape of the neck.

October 24th. He was quite delirious, and could not be made to answer questions. He was constantly muttering to himself and talking incoherently. The face was more paralysed; the pupils were dilated and insensible; pulse 96, weaker; the skin was hot. He had passed his urine and motions involuntarily.

Evening. He was quite insensible; his breathing was stertorous. He died at 11 p.m.

POST MORTEM EXAMINATION, fifteen hours after death. The body was in good condition. There was a large scalp-wound, exposing the bone behind the ear, with much lymph in the subaponeurotic tissue. There was another wound on the left side, at the bottom of which a portion of bone had been removed, so that the dura mater was exposed. A portion of the squamous bone was depressed. The dura mater under the depressed bone was healthy, while the exposed portion was smeared

with lymph. A considerable quantity of pus was found in the cavity of the arachnoid on the left side. Some blood was effused in the meshes of the pia mater, over the left hemisphere of the cerebellum, the pons, and down the cord. There was no laceration of any part of the brain; and, except for the compression it had received, it was perfectly healthy. The fracture was traced across the middle fossa into the sphenoidal fissure. There was no blood in the orbit.

CASE III. Mark Stevens, aged 41, bricklayer, was admitted March 9th, 1860, under Mr. Johnson. A short time before admission, he fell off a scaffold, striking his head. He was insensible when picked up. On admission, he had not yet rallied from the concussion, but could be roused sufficiently to be made to answer questions. Pulse 80, weak; pupils contracted, sensible. There were two scalp-wounds on the right side of the head, one of which communicated with bone. A most careful examination failed to detect any fracture.

March 10th. He was quite conscious. Pulse 76, weak; pupils natural; tongue clean.

He went on well till the 15th, when he complained of pain in the head; and was ordered to have three grains of calomel immediately, and a senna draught in four hours.

March 17th. He had become somewhat delirious; but, when roused, answered questions rationally. Pulse 120, full; face flushed; tongue furred; skin hot. The wound was dry, and the tissues infiltrated. He was ordered to have three grains of calomel every four hours.

March 18th. He seemed rather better; there was less delirium, less pain in the head. The bowels acted. The tongue was still furred. Pulse 118.

March 19th. He was still wandering; seemed much weaker and lower. Pulse 100, very weak. He was very restless. There was no discharge from the scalp.

March 21st. A slough having separated this morning, a depression of the bone was discovered under the scalp. An incision was therefore made, and an extensive depression discovered. A very large portion of bone was removed. The bone was very vascular, and had a thick coating of lymph up it.

March 22nd. He had been very restless and delirious all night. His respiration was quick; pulse 108, small and weak. He answered questions rationally, and protruded his tongue when told to do so. The pupils were natural, and acted.

March 23rd. He was still sensible. The breathing was more oppressed. Pulse 112, weak; tongue dry. The wound was quiet; a little healthy pus discharging.

March 24th. Insensibility gradually came on during the night. He was now in a state of coma; pupils dilated and insensible. His breathing was stertorous. He had paralysis of the left side. The pulse was slow and laboured. He died at 4 p.m.

POST MORTEM EXAMINATION. There was a large sloughy wound over the right ear, communicating with a hole in the skull. The dura mater was exposed, and covered with blood and lymph, but not injured. In front of the hole there was a piece of bone, quite loose, but on a level with the rest of the skull. There was a little blood between the bone and dura mater. There was a large quantity of purulent lymph in the arachnoid cavity, in the right posterior fossa, and below the fracture; and a still larger quantity of turbid serum in the subarachnoid tissue down to the base of the brain. It did not appear that the brain was in any way injured. At one point, the cortical structure, below a considerable mass of purulent lymph, appeared a little softened. In all other particulars, the brain was healthy. The other parts of the body were not examined.

Though the rule is to trephine in compound fracture with depression, there are some cases in which this treatment is not necessary, especially in children; for it is an established fact, that children bear greater injuries

to the head with impunity than adults; and that the same amount of injury is less often followed by evil consequences in children.

CASE IV. John C., aged 10, was admitted April 20th, under Mr. Hewett. Just before admission, he was run over by a water-cart. It was stated that the wheel passed over his head. He was stunned to a certain extent by the accident. On admission (11 A.M.), he was not insensible, but was somewhat stupid, as if rallying from concussion. There was a large semicircular wound extending from the external angular process of the frontal bone to the occiput, forming an oval flap. There was a fracture of the skull corresponding to the external wound, with depression of the bone; the lower portion being driven under the upper. There was bleeding from the right ear; no bruising about the face.

1 P.M. Since admission, the boy had vomited a quantity of black blood. There had been bleeding from the nose; and there was considerable ecchymosis around the left eye. The pupils acted. He was quite sensible, and answered questions rationally, but did not give a very clear account of the accident. Tongue dry; pulse 90, quiet. He was ordered to have three grains of calomel immediately.

He went on well without any symptoms till May 3rd, five days after the accident, when the scalp around the wound was noticed to be puffy. An incision was made; and a quantity of bloody pus, mixed with brain-like matter, escaped.

On May 8th, slight facial paralysis of the left side was noticed; which, however, had quite disappeared on the 14th. He had not a single other untoward symptom, but recovered, and went out perfectly well.

Two other cases of very formidable compound depressed fracture of the skull in children have occurred lately at this hospital, in which no operative measures were adopted, both patients recovering.

On referring to my case-book, I find notes of eight cases of well-marked compound depressed fracture of the skull, which presented no symptoms of compression on admission. In two of these cases, trephining was at once performed; the other six being left entirely alone. Of the two that were trephined, one recovered. Of the six other cases, three were those of the three children referred to above, which recovered; two others had intracranial suppuration, and died; and one recovered; but it is probable that in this case there was only depression of the outer table.

We come now, in the third place, to consider a class of cases about which there can be no doubt as to the plan of treatment; though, unfortunately, it is one rarely followed by success. I allude to depressed fracture of the skull, accompanied by symptoms of compression of the brain. In these cases, with very few exceptions, it is necessary to trephine. We cannot place our patient in a worse position than that in which he already is, and we must resort to operative measures as a last resource. The symptoms, however, even in this class of cases, vary very much; and we must be guided by these, in a great extent, as to our prognosis. Contrast the two following cases.

CASE V. Redman Callaghan, aged 16, was admitted January 23rd, 1862, under Mr. H. C. Johnson. A short time before admission, he fell backwards off a ladder, a distance of twenty feet, striking his head. On admission, there was perfect insensibility, stertorous breathing, and paralysis of the right side. There was also ptosis of the right eyelid; the pupils were dilated and insensible; and there was slight eversion of the right eye. The teeth were clenched. The pulse was 62, laboured, and intermittent. He had slight occasional spasm of the face. There were mucous *râles* over both lungs. There was a distinct depression, with crepitus, over the occiput. An incision was made down to the bone, and a considerable quantity of brain-matter exuded. No fur-

ther attempt was made. He died fourteen hours after the accident.

CASE VI. William Harde, aged 44, police-inspector, was admitted May 31st, under Mr. G. D. Pollock. He was supposed to have been thrown off his horse. He was picked up insensible. On admission, he was unconscious, but sensible to pain. There was no paralysis; the pupils were natural; pulse 60, soft. A small scalp-wound, with depressed bone, was found over the left temple. He was trephined, and the bone elevated. The following day, he was sensible, and remained so for five days, when symptoms of meningitis supervened; and he ultimately sank, and died on the twelfth day after the accident.

How different were the indications of brain-mischief in these two cases! And it is to this that we must more especially look, as we do not so much dread the pressure produced on the brain by the depressed bone, as the concomitant injury which the brain may have, nay, generally has received. Mr. Hewett, in his lecture, says: "It has never fallen to my lot to meet with a single case of cerebral disturbance, of a formidable or urgent character, in which such symptoms were wholly dependent upon depressed bone. In every case which I have seen with these symptoms strongly marked, there was also some extensive extravasation of blood, or some serious lesion of the brain-substance itself." And certainly the records of this hospital coincide with this view. Of thirteen cases of depressed fracture of the skull which died in this hospital, and were examined after death, in nine the brain was lacerated, and much blood effused; in three there was extravasation of blood within the arachnoid, and bruising of the brain; and in the other one there was simply extravasation between the bone and dura mater, and no apparent injury to the brain-substance beyond compression.

CASE VII. James Holden, aged 23, bricklayer, was admitted August 20th, 1861, under Mr. Hewett. A piece of wood had fallen from a scaffold, a distance of sixty feet, on to his head. On admission, he was insensible, and would not answer when spoken to. He, however, resisted any attempt to move him. He was very restless. There was a great amount of ecchymosis around the left eye, and extravasation of blood over the left side of the head. There was a small scalp-wound, leading down to bone, at the anterior superior angle of the parietal bone. There was no paralysis; but the left pupil was dilated, the right contracted. There was bleeding from the nose.

In an hour and a half, the breathing became stertorous, and respiration difficult, and all the limbs paralysed. An incision was made, and a depressed fracture discovered at the anterior inferior angle of the parietal bone. This was elevated with the trephine, and a quantity of blood escaped; but without relief to the symptoms, as he sank and died the same evening.

POST MORTEM EXAMINATION. There was the hole in the skull made by the trephine, at the anterior inferior angle of the parietal bone. From this point proceeded two fractures; one running forwards and outwards through the coronary suture to the left temporal fossa; the other directly backwards to the extent of an inch. There was also a fracture running through the sella tursica to the crista galli. There was much clotted blood on the surface of the dura mater of the left hemisphere. There was a large quantity of serum in the dura mater. The brain was not lacerated.

CASE VIII. George Ballard, aged 30, was admitted July 11th, 1860, under Mr. Hewett. A large piece of timber had fallen on his head, afterwards striking his thigh. On admission, he was perfectly insensible. There was a large extravasation of blood on the left side of the head, with two small scalp-wounds. The breathing was stertorous, and there was bleeding from the nose. The right thigh was fractured. Six hours after the accident,

he was partially sensible. Pulse 56, laboured. He could not move any of the limbs. A crucial incision was made over the vertex; and an extensive fracture, with depression, was found. A large triangular piece of the frontal bone on the left side, limited posteriorly by the coronal and laterally by a fracture in the course of the obliterated frontal suture, was depressed and driven under the adjacent bone. This bone was elevated, after a piece had been removed by the trephine and Hey's saw. After the operation, he was sensible and able to speak; but the breathing again became stertorous, and he died thirteen hours after the accident.

POST MORTEM EXAMINATION. There was a fracture on the vertex of the head, which had traversed the groove for the middle meningeal artery, which was torn across. There was an immense extravasation of blood between the bone and dura mater.

III. Compression by Effusion of the Products of Inflammation. Here the treatment is surrounded with difficulties, as we have to take into consideration two points—first the presence, and secondly the situation, of the pus. The first is always a difficult thing to determine; but the second is all but impossible; such cases as those described by Pott being very rare in the practice of the present day. The treatment is, therefore, necessarily very unsatisfactory, as may be seen from a narrative of the following cases.

CASE IX. John K., aged 28, was admitted Oct. 22nd, 1858, under Mr. Johnson. Two days before admission, in a quarrel with a fellow-servant, he was struck on the head with a bar of iron, which inflicted a wound about an inch and a half in length on the forehead. He did not apply for any assistance till his admission, as he suffered so little inconvenience; though his wife stated he was delirious the night of the accident. On admission, he was a strong, healthy-looking man. His skin was hot, but moist; the tongue was slightly furred; his pulse was quick; and there was a restless manner about him. He had a wound on the forehead, extending from the median line to the left side, an inch and a half in length, the lower part of which was in a sloughy condition. The bone was exposed and rather rough, as if fissured. He was ordered to have two grains of calomel every six hours.

October 23rd. Symptoms of delirium tremens appeared to be coming on. He was ordered gin and opium.

October 24th. He slept well; answered questions rationally. He was very restless. Pulse weak, 90; tongue dry and white.

12 P.M. He was delirious, and had had a convulsive fit. He was ordered to continue the calomel; to have a drachm of mercurial ointment rubbed in every three hours; and a blister applied to the nape of the neck.

In the evening, he was more rational, but passed his urine and motions involuntarily.

October 25th. He was much convulsed; the left hand was most contracted. At 10 A.M. he became unconscious. There was reflex action on irritating the feet. Pulse 96. The pupils were dilated; there was spasm of the right lid, and ptosis of the left. At 1 P.M. symptoms of compression were strongly marked. The trephine was applied in the region of the wound, but he died during the operation.

POST MORTEM EXAMINATION, twenty-three hours after death. There was a wound over the left frontal eminence; here a piece of bone had been removed. A small fissure led downwards from this part, which at first involved the external table of the skull only; this led down to a comminuted fracture of the left orbital plate of the frontal bone, near its junction with the ethmoid. There was no wound of the dura mater in any part, and no effusion between it and the cranium. A large quantity of pus was found diffused over the hemispheres of the brain, both in the arachnoid and sub-

arachnoid spaces. This was in greater quantity at the right side in the parietal region, and had exercised a good deal of pressure on the brain. The left anterior lobe of the brain, near the olfactory bulb, was slightly lacerated, corresponding to the fracture above mentioned. No other organs were examined.

CASE X. James S., aged 9, was admitted July 30th, 1861, under Mr. Tatum. Half an hour before admission, he had been kicked on the forehead by a horse, and rendered insensible. On admission, he was quite conscious. There was a large wound over the left orbit, the bone being exposed. The tongue was clean; the pulse was quiet; the skin cool and moist; the pupils natural.

July 31st. He had passed a quiet night. There were no symptoms of brain-mischief. The bowels had acted. The pulse was quiet; the pupils natural.

August 1st. He had been very noisy and delirious all night. Pulse 120; tongue dry and furred; skin hot. He had twitching of the muscles of expression.

3 P.M. Symptoms of compression had come on. He was perfectly insensible. The pulse was laboured; the pupils dilated. There was no paralysis. A piece of bone was elevated with the trephine, but without avail. Profound coma came on; and he died at 4 A.M., August 2nd.

POST MORTEM EXAMINATION. There was a sloughy wound over the left eyebrow, leading down to a hole in the skull. The dura mater at this point was uninjured. There was a considerable amount of pus in the cavity of the arachnoid. The anterior lobe on the left side was completely broken up, and converted into a large abscess. The roof of the orbit on the left side was driven up into the brain. No other organs were examined.

Transactions of Branches.

READING BRANCH.

REPORT OF THE READING PATHOLOGICAL SOCIETY.

By H. COLLEY MARCH, M.B.

[Read July 1st, 1863.]

WHEN I accepted the proposal which the Pathological Society did me the honour to make me, to read the present address, I thought, Mr. President, that my grand difficulty would have been to digest and arrange in compass sufficiently narrow the transactions of the past year; but, alas! one far more formidable presented itself. To have searched through a thousand reports, and to have made an abstract of the most interesting and instructive, would have been a patient and laborious occupation, but one that I should gladly have undertaken. My difficulty, however, was of an opposite kind, and consisted in this, that the whole number of reports read before the Society during the twelve months ending to-night was only ten.

Thrown, then, so greatly upon my own resources, I have had the arduous task of appending to the abstract of the reported cases a more or less lengthy commentary. This course has been rendered obligatory by the necessity of occupying your attention during the customary time; and, if anything I may say shall seem to you unfitting in a retrospective address, I will cast myself upon your kindness and generosity to excuse me, or at least to lay some part of the blame upon the inexorable requirements of my unfortunate position.

A few cases were brought before the Society illustrating the interesting subject of

URÆMIC INTOXICATION.

Albuminuria: Epileptiform Convulsions: Coma: Death. Dr. WELLS related the case of J. N., a man aged 36,