

and long-continued symptoms arising from injury to this bone. Mr. Warren believes these resemble most closely the acute pains which attend periosteal inflammation. "Scarcely an instance," he says, "can be said to have resulted in perfect recovery, and many of them have caused severe local symptoms for some months, and even years, afterwards." In the first case the injury was caused by a fall on the stairs, "the pain and inability to sit lasted more than a year, and the sensitiveness of it continued for ten years after the accident." In the second case, also caused by a fall on the stairs, there was some displacement of the bones, which was adjusted at the time; at the end of six or seven months the patient was able to walk a little about the room with support—"she did not recover from the immediate effects of the accident for one or two years, and now, at the end of eight years, is not able to ascend stairs without suffering." Another of the patients had the coccyx fractured and displaced some years before. "At the time, she was confined about five weeks with very severe symptoms, and never ceased to suffer in the part since." Remarking on these cases, Mr. Warren says Dr. Simpson has described the affection, "and in some obstinate cases, after having tried all remedies in vain, proposed, and practised with success, the girdling of the coccyx by subcutaneous section, just above the diseased part, so as to cut off all nervous communication with it." Mr. Warren does not seem to have performed any operation for the disease himself, and it will be seen from the foregoing he has not correctly apprehended Simpson's operation, or the objects proposed to be attained by it. I may further mention that the lady I operated on continues, now October, 1867, perfectly free from pain.

TRANSACTIONS OF THE COUNTY AND CITY OF CORK MEDICAL AND SURGICAL SOCIETY.*

SESSION 1867.

DR. JOHNSTON, President.

Hemicephalic Infant—Protrusion of the Membranes of the Brain through a Fissure of the Occipital Bone—Supernumerary Fingers and Toes. By JOHN POPHAM, M.A., M.B., Dub. and Cantab.; Physician to the Cork North Infirmary.

I BEG to exhibit to the Society a female infant, with several anomalies of structure. It has arrived at, or about, its full time. Both the body and members appear above the average size, which is partly due to a large

* These reports are supplied by Dr. Purcell, Secretary to the Society.

development of adipose substance. The face, in its lower two-thirds, presents nothing very remarkable; there is no hare-lip, or cleft of the palatine vault; the tongue, however, is uncommonly large, and the frænum linguæ dense and extending to the tip. In the upper third the orbital cavities are completely contracted, and the vault of the skull is depressed, so as to convey to the eye a peculiarly idiotic expression, which is heightened by a red, sacculated tumour three inches long, and over an inch wide, which hangs down from the back of the head in a grotesque fashion, having protruded between the two portions of the occipital bone, which have remained abnormally disunited.

Supernumerary digits exist upon the four extremities, but with some variation. The little finger of the right hand is trifold. At the level of its second joint a smaller one branches off, and a third sprouts from the latter; both the offshoots are small, but the nails are perfectly formed. The remaining fingers of the right hand are natural. On the left hand the little finger again is divided into two complete digits. Thus the excess of development in both hands lies in the same direction, namely, the *little* finger.

Upon each foot there are six toes, all in the same plane, and each toe beautifully regular and proportional.

The genital organs show no defect, the sphincter ani is wanting, the orifice being large and patulous.

I made a dissection of this monstrosity upon the day following its exhibition to the Society. There was nothing very anomalous in the thoracic or abdominal organs, except that the thymus gland was unusually large. The head was then carefully examined. I expected to find an absence of the parietal bones, but on removing the scalp, which was nearly half an inch thick, dense and loaded with fat, the parietal bones came into view, meeting at so obtuse an angle as to seem almost flat; both bones were small, and so completely ossified that the scalpel grated harshly on them. They were so closely knit together, and to the frontal, as to require force to disunite them. The frontal and temporal bones were also small, and the orbital cavities rudimental. The base of the skull had the usual cavities, but somewhat irregular.

The supposed encephalocele was a hernial protrusion of the membranes, and it contained in a pouch a quantity of bloody serum. No traces of brain could be found in it; in fact, it seemed a kind of diverticulum to the membranes, which probably were devised by nature for a brain of the average dimensions. The brain itself was quite undeveloped, each anterior lobe being about the size of a filbert, and the whole cerebral mass not larger than a small hen's egg, and so pulpy and diffuent that its components could not be distinguished. The spine was not examined.

There were some curious features in the parentage of this monstrosity.

The mother had been insane, and was reported to have been so at the period of cohabitation. The father was a man of violent passions, and fond of drink. According to the mother's account he was intoxicated, and used violence with her. He was married, but she was not. The nature of her insanity was religious melancholy. She was quite sane at the time of her labour. No malformation existed in either parent. The child was a first-born, and she felt it moving as far as the last week of gestation. The labour was tedious; the face presented, and the ear was felt by the midwife, Miss Tedford. The child was lifeless when born; the skin showed no syphilitic taint. The mother was not aware, and was not told, of any defects in the child.

Remarks.—In this case we may notice some points of interest—1st. The connexion of the malformation of the brain with the insanity of one parent and the drunkenness of the other; 2ndly. Its association with force. M. Geoffroy St. Hilaire, the elder, held that those monstrosities in whom the cranium remains open, and the brain deficient, are mostly produced by some mechanical violence upon the abdomen of the mother; 3rdly. A co-operating cause may be found in terror at the violence used. Rokitanski favours the opinion that strong emotion influences the growth of the embryo, so that here we had lunacy, inebriety, violence and fright as conjoined causes of cerebral imperfection; 4thly. The law of compensation of St. Hilaire (*loi de balancement*) is not quite sustained in this case as regards the supernumerary digits. By his rule an excess of parts in one direction balances a defect of parts in another. Hence we should suppose that when six toes existed on one foot, there ought to be but four on the other, or a superfluity of manual digits should conditionate a deficiency in the pedal, so as to keep up an equilibrium of formative effort, but none of those compensations took place. Perhaps the overgrowth in the extremities had its correlative undergrowth in the arrest of development in the cerebrum, but the relation seems anomalous between an abortive brain and a luxuriance of parts of a diverse structure. 5thly. The overplus of growth at the periphery and the want at the centre accords with that law in monsters that the *direction* of growth is centripetal. 6thly. The association of an imperfect brain with an undue condensation of scalp, an undue amount of fat in the body, and an undue ossification of the skull bones; diminution being still opposed to preponderance. Perhaps the resistance of the overlying parts checked the growth of brain, and forced the membranes through the fissure of the occipital bone—another anomaly, nature usually leaving the sutures loose, while the occipital portions are united early. Lastly. It is stated by writers that monstrosities rarely occur in first pregnancies. Such was not the case in the present instance. In some families the tendency to anomalies is considerable.—13th February, 1867.

Dr. N. J. HOBART read the two following cases of Traumatic Tetanus, recently treated by him in the North Infirmary:—

CASE I.—Daniel Fitzpatrick, aged forty, a sailor, admitted to the North Infirmary on the afternoon of Wednesday, the 5th December, 1866. On Sunday evening, the 2nd instant, whilst on his passage from Liverpool, he experienced tightness in the chest and a sensation as if the bowels were contracted, together with pain in the back and pole, accompanied with profuse perspiration. Thinking he would get better, he continued to work till three o'clock on the following day, when to these symptoms, which were gradually increasing, was added a stiffness in his arms. On Tuesday the 4th, he was visited by Dr. Callaghan (who was requested to visit him as a case of cholera). Dr. C. purged him freely with calomel and colocynth and black draught, and directed mustard poultices. The symptoms having increased in severity on the following day he was removed to the North Infirmary.

On admission he denied having received any wound, but on examining him carefully, it was discovered that in a fall on board ship some ten or twelve days previously he had nearly torn off the nail of the middle finger of the left hand, and had a clean incised wound on its anterior aspect still unhealed, and which looked deep owing to the thickness of the cuticle. His symptoms on admission are thus described on his card by Mr. Chatterton, the clinical clerk:—There is great rigidity of the muscles, particularly those of the back, chest, and abdomen, as also those of the neck and arms; the jaws are not very firmly fixed; he can protrude the tongue to a slight extent; his voice is low and hoarse; he complains of difficulty in getting rid of a quantity of a viscid secretion from his throat and mouth, and has difficulty occasionally in coughing; the countenance is anxious, but the “risus sardonius” not well marked. He winces sometimes from lancinating pains in the loins, and is suffering from smart tetanic spasms. The bowels have been freely acted on by the medicine; the urine normal in quality and quantity; pulse 92, full and regular.

Four p.m.—Ordered a hot bath immediately, to be gradually raised and kept at 120 for half an hour; and the following draught:—

R. Tinct. opii. min., xl.
 Chloroformi min., xx.
 Pulv. glycyrrhizæ, gr. x.
 Aquæ, ʒi.
 Ft. haust. stat. sumd.

To be followed in two hours by one of half this strength, and repeated every two hours if the spasms are severe.

Ten p.m.—Expresses himself greatly relieved by the bath; has had nearly two hours' sleep, and no violent spasms since. Ordered to have

twenty minims of laudanum and ten minims of chloroform every hour or every two hours. Sherry and strong beef-tea to be supplied freely.

December 6th, ten a.m.—Was tolerably easy, and had occasional sleep up to one a.m., when the spasms became severe, and recurred at shorter intervals, more particularly about seven a.m.; the opisthotonos at times is extreme; greatly annoyed at the difficulty of getting rid of the tenacious secretion from mouth and pharynx.

The chloroform and laudanum draught of yesterday to be repeated, and a tobacco enema to be administered immediately, to be repeated every two or three hours according to symptoms. Chloroform inhalations, which had been occasionally employed during the night, to be administered during spasms, and as far as possible to anticipate them; to be freely plied with beef-tea and wine.

December 6th, four p.m.—Spasms have not been so frequent, and are invariably relieved by the chloroform; there is greater difficulty of swallowing, but the patient says he feels much better.

December 6th, ten p.m.—Continues much about the same state; does not suffer much; however, the difficulty of swallowing is now so great that he refuses to take drinks. Pulse has risen to 110. Ordered to have chloroform inhalations occasionally through the night, to have a tobacco enema at intervals of six hours, and injections of beef-tea and whiskey.

December 7th, ten a.m.—Was watched during the night by Dr. O'Sullivan and Mr. O'Kelly, who administered chloroform each time the tetanic spasm threatened; the inhalation had the effect of prolonging the interval between the spasms from every five minutes to about half an hour, and sometimes longer; however, for the last few hours the chloroform appears to have lost this effect, as the spasms are very frequent, though the patient suffers very little. He is greatly prostrated, the pulse 120, and feeble. Thoracic effusion has been going on for some hours, and he is evidently sinking.

Half-past eleven a.m.—Had telegraphed to Dublin for a supply of nicotine, which just arrived; though no benefit could now be expected from it, half a drop was endermically injected. Almost simultaneously the patient got a severe spasm, and died in a couple of minutes.

Owing to the objections raised by the friends, it was impossible to ascertain the condition of the spinal cord, &c., in this case.

CASE II.—Ellen Deasey, aged fifty, had a molar tooth extracted on the 24th January. Two days afterwards complained of severe pain along spine from occiput to sacrum, and pains in her legs; felt as if she had got a heavy cold. She stated she had "a quantity of phlegm on her chest which she could not get rid of." On the 28th she was seen by Dr. Callaghan; her symptoms had then increased, but she more particularly

complained of pains in her neck and occasional spasms of her legs. As she resisted all Dr. Callaghan's urgent solicitations to go into hospital, her neck was freely leeches and aperient medicines prescribed. On the 30th she consented to go to hospital, and was accordingly admitted to the North Infirmary about three p.m., when, owing to my absence, she was seen by Dr. Shinkwin. On admission she complained of *some* pain in her neck and back, but she said it was nothing compared to the intense pains in her thighs and legs. Trismus was complete; the risus sardonius well-marked; sterno mastoid muscles rigid; abdominal muscles hard; great tympanitis; bowels not relieved since the 26th; pulse thready—120; respiration quick; no action of intercostals. Ordered scammony and calomel in five-grain doses every four hours, and turpentine and assafetida enema. Fomentations to be applied frequently to the abdomen, thighs, legs, &c.

Ten p.m.—I saw her at this hour; she had had two of the scammony and calomel powders and the enema, without any effect on the bowels; has had some sleep; can now articulate distinctly, but in a shrill tone of voice. She can open her jaws sufficiently to protrude the tongue slightly; says she would be all right if she could get rid of the pains in her thighs. Before leaving the bedside I gave her three-quarters of a drop of nicotin in a little sherry and water, and directed three draughts, each containing a half drop, to be given at intervals from three to four hours, between this and ten on the following morning.

The assafetida and turpentine enema to be repeated in four hours if necessary.

To have strong beef-tea and sherry frequently through the night.

January 31st, 11 a.m.—Had a tolerably quiet night; some occasional spasms and partial opisthotonos, which did not give her much pain; took nicotin regularly, and also the broth and wine. The bowels have not yet been acted on; has got rid of some flatus; abdomen not so tympanitic. Astonishment is expressed by the students at the slight appearance of suffering.

To have immediately three-quarters of a drop of nicotin, to be repeated in three hours.

Six p.m.—Has been easy all day. The jaw is getting so locked that she has begged to be permitted to keep a piece of wood between her teeth, a request which was of course complied with. She has experienced considerable difficulty in swallowing for the past two hours; pulse about 120, but decidedly weaker. Given three-quarters of a drop of nicotin; to have beef-tea injections.

Nine p.m.—Difficulty of swallowing now so great that she refuses to take anything; pulse 130, still more feeble, at the same time expresses herself quite easy. To have beef-tea and wine injections, and the nicotin to be given in half-drop doses in injections every three or four hours, if the spasms become violent.

From this the patient gradually became weaker, until eight o'clock on the following morning, when she expired, retaining her consciousness to the last, and having had but some very trifling spasms through the night.

Considerable difficulty was experienced in making a *post-mortem* examination; however, I succeeded in exposing the cord for about four inches below the medulla oblongata. The membranes were highly vascular; the sheath of the cord was so red that it appeared to have been painted, and the quantity of fluid around it unusually large. On a section being made both the white and grey matter were congested, but more particularly the grey.

Although both these cases terminated fatally, I am satisfied the details will not be without interest to the Society. Were it the practice invariably to publish all cases independent of the result, we would more readily arrive at the relative value of special remedies.

Had these cases been admitted to hospital earlier a fairer opportunity would have been afforded for treatment; but I must confess I have little confidence in the remedies employed as *curatives*; in both, however, the usual sufferings were wonderfully mitigated, and the patients saved an incalculable amount of pain—in itself a great desideratum. As to treating the disease scientifically and successfully, we must wait until more is known of its pathology. The valuable researches of Dr. Lockhart Clarke and others would lead us to hope that much light will be thrown on this subject ere long.

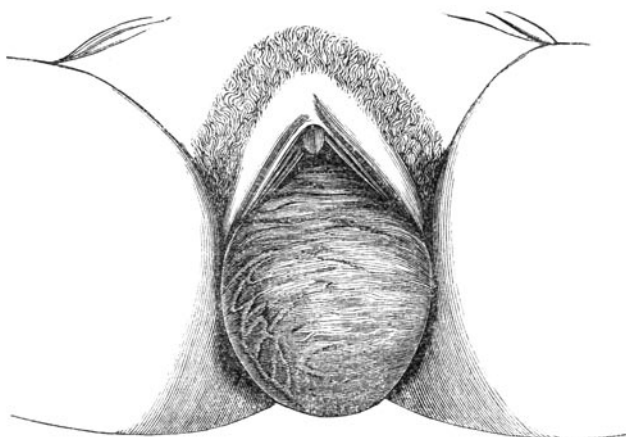
I regret extremely it had completely escaped my memory that Dr. Lockhart Clarke was anxious to receive spinal cords of tetanic patients, until reminded by my friend Dr. Johnston (our esteemed Vice-President). The specimen I had was then too much mutilated. Should any cases occur here again, I trust we will not neglect the opportunity of having the specimens examined by so experienced an observer.—13th February, 1867.

Tumour with Genital Organs Attached. Exhibited by H. M. JONES, M.D., M. Ch.; L.R.C.S.E., &c., &c.; Demonstrator of Anatomy, Queen's College, Cork; Physician Cork City Dispensary.

SIR, I show you this pathological specimen, and a drawing of a complete prolapse of vagina, involving uterus and bladder, which came under my notice in the dissecting room at the Queen's College, Cork.

It occurred in an old subject, and was interesting as having the mucous membrane of the vagina converted into wrinkled integument, tough, and having the appearance of long exposure. I made at the time I saw it a careful examination, and perceived, at its most dependent portion, a very minute aperture, scarcely the size of a pin's head, and into which I passed a small probe. Feeling the tumour externally, I

discerned a small hard central body not much larger than a good sized quill. The appearance of the tumour was such as you see represented in this photograph, from a drawing by Mr. Hazle, of the Queen's



College, Cork. I made an attempt to pass a bent probe into the bladder, rupturing the urethra before I finally succeeded. By a small incision made afterwards higher up, I found that the bladder had descended in front of the uterus and was adherent to it. The latter viscus being extremely small, its cavity was almost obliterated. In the bladder was a quantity of thick yellow turbid urine. I dissected off the mons veneris and labia, preserving the appearance of the tumour as it presented itself, also keeping the Fallopian tubes and ovaries in connexion for exhibition, the left ovary having a cystic growth of small size at its side. It appeared to me to be a specimen worth recording, as exemplifying such complete prolapse of vagina, bladder, and uterus in one tumour. The entire conversion of the mucous membrane of the first of these organs into integument, tough, and forming a protection to the parts contained within, when, added to the fact of the uterus and os being of such a small size, as also the adherence of the bladder to the uterus, this anatomical arrangement, rendering it almost an impossibility to pass a catheter unless perpendicularly downwards, make it interesting. I think it a curious fact that a woman could have survived to such an age with such an abnormal condition of her urinary and genital organs.—*13th February, 1867.*

A Case of Removal of a Portion of Gum-elastic Catheter from the Bladder.

By F. A. PURCELL, M.D., M.R.C.S.; Physician to the Cork Fever Hospital, and Secretary to the Cork Medical Society.

ON the evening of March 2nd I received a telegram from a gentleman

from Charleville, stating—"Will be in Cork at eight o'clock; want to see you very badly." He duly arrived. Being in no pain at the time he told me his story as follows:—That at four o'clock p.m. this afternoon he passed into his bladder a No. 4 gum-elastic probe-pointed catheter, one of Maw's black variety, without the stilette; he suffered at the time owing to over-exercise, partial retention of urine, caused by spasmodic action supervening on two organic strictures existing in the urethra; for these strictures he had been attending me, but as he was obliged to leave town I taught him to pass instruments, generally G. E. bougies, and being nervous of the retention coming on, the last day he happened to be in Cork he bought a probe-pointed gum-elastic No. 4 catheter, one of Maw's French black variety. This one he passed for the first time on the present occasion.

In passing the catheter into the bladder he suffered no more pain than usual. Water flowed out and bladder was emptied. On withdrawing the catheter he experienced great pain whilst it was passing through the stricture; this he did with great care and tenderness, and when it was wholly withdrawn he observed the round bulb portion gone, having parted at the eye. He concluded at once, from the care with which he had withdrawn the catheter, the bulb had remained within.

At five o'clock p.m., an hour after the occurrence, he micturated in a good flow without a check, anxiously looking in the pot for the missing bulb. At 5.45 p.m. he again felt inclination to micturate, when only a few drops had passed. He felt something move on from the bladder to the stricture, which checked the flow. He then introduced a No. 4 G. E. bougie straight into the bladder without difficulty, in order to push back the foreign body and allow the water to flow. Withdrawing the instrument, he again tried but failed to get water off. He now determined to start for Cork by train, having consulted two doctors in Charleville, who recommended him to start. Whilst on the car going to the station he felt most uncomfortable about the stricture; the sensation as of an instrument being in the stricture; this continued until he reached Mallow station at 7 p.m., when the train stopped. Feeling the bladder full and uncomfortable, he made, "for curiosity sake," an effort to pass water, and felt something as if slip out very gently and smoothly to the orifice; at the same time water began to trickle down his leg. The thought struck him that the obstacle had passed out, so he restrained the passing of the water, and got out of the carriage and went to the water-closet of the station. Here not a drop came. Seating himself again in the carriage he felt somewhat more easy, both as regards the sensation in the stricture and as to the fulness of the bladder. He arrived at Blarney at 7.30, made another effort to pass water in the carriage; a little trickled down his leg, but stopped of itself. On going through the tunnel a strong desire to make water seized him, and he

yielded. The water began to flow in its usual easy manner, but when he saw the carriage floor streaming, feeling somewhat ashamed, he checked the flow. On the train's arrival he felt so much relieved that he walked from the station to my house, where he arrived at eight o'clock p.m.

Having relieved his mind by giving me the history of his case, a quarter of an hour after arriving (8.15 p.m.) he desired to make water, and passed into a vessel about a pint, with a fair full stream; but towards the end the flow stopped with a sudden check, and the customary drops did not trickle from the urethra. I made him rest quiet, and did nothing. From the sudden check to the flow I concluded the obstacle was still in the bladder. At 10 p.m. he was unable to void a drop, and feeling unpleasantly full he "begged" of me to interfere. I accordingly introduced a No. 5 G. E. probe-pointed bougie, not inserting it further than just to pass the stricture which exists six inches from the orifice, thinking that if I dilated the stricture the outward pressure of water might force the bulb before it. No water came. I then passed into the bladder a No. 3 G. E. catheter, with its stilette, and emptied the contents. Feels no great uneasiness of any sort since the occurrence at Mallow, and is comfortable. I sent him to bed, and gave him thirty minims of tincture of opium.

March 3rd, Sun. morn.—Slept but little, but this he attributes to the noise of carts passing the house. He got up at 6.30 to micturate, and was unable to void a drop, and then introduced into his bladder a No. 4 G. E. bougie; no water followed, and he returned to bed. I drew off his water with a No. 4 G. E. catheter at 8.30 a.m., much to his relief. He felt sick all the morning; took a cup of tea and a morsel of bread, which the stomach rejected. This I attribute to the opium given at bedtime. Pulse 64.

2 o'clock p.m.—Voided about half a pint, but with a narrowed stream; no check whatever or spasm.

7 o'clock p.m.—Passed a small quantity of water, and states that he experiences a feeling as if something was projected from the bladder as far as the stricture, which stops the flow.

10.30 p.m.—Dr. White kindly remained with him, as I had to leave town. In Dr. White's presence I determine to explore the urethra. I introduce my finger into the anus, and for as far back as I can go I can discover nothing, nor from that forward. I introduce simply through the stricture, in order to dilate a No. 4 silver catheter. He feels, after all this, an urgent desire to empty the bladder, and tries without success; and implores of me to draw off his water, which I do with a No. 3 G. E. catheter. I now advise bed, and give him calomel gr. 5, with a grain of powdered opium.

March 4, 8 a.m.—Slept tolerably well; pulse 70; tongue clean; no

uneasy pain; unable to make water. I draw off about six ounces of heavy and deep-coloured urine with No. 5 G. E. catheter. I give him a large dose of the Eff's citrate of magnesia.

Dr. Gregg came to see him with me to my study. We determine to gradually dilate the stricture by means of gum-elastic catheters, allowing them to remain in twenty-four hours at a time. I commence by introducing a No. 5, which we secure by tying in; and give him the following mixture:—

Liquoris potassæ, dr. 2.
Tinct. hyoscyami, dr. 4.
Sp. ætheris chlorici, dr. 1.
Decoct. pareira brava ad oz. 8. M.

An ounce every third hour.

March 5, 8 a.m.—Slept fairly; pulse 70. The No. 5 catheter held in till about five o'clock this morning, about which time it passed out. Voids water with ease, with the instrument out. I again introduce the same catheter.

2 p.m.—I withdraw No. 5 and pass in No. 6.

March 6, 8 a.m.—Slept well. The catheter remained in till morning, but slipped out when he was asleep. I introduce the same, which passes in with ease.

2 p.m.—Took out No. 6, intending to introduce the next number, but first desire him to pump, to try if the pressure of water may force out the obstacle before it. To our great delight and satisfaction, following a few drops of water, without any perceptible sensation, the foreign body passes into the vessel, the bulb portion foremost, perfectly clean as when introduced, having been in 89 hours.

It is, as I said above, the bulb from the eye out, that is, including half of the eye of a No. 4 Maw's French black gum-elastic probe-pointed catheter, being three-quarters of an inch long. I beg to present it to you for your inspection, as also a duplicate of the same lot and number. What strikes me most about this catheter is that the eye is placed at the very thinnest and most slender portion of the catheter, a most objectionable class of instrument, and of a most brittle description.

This class of case is of no common occurrence, complicated as it was with two existing organic strictures, one at six inches, the second about an inch from the first. In *Guy's Hospital Reports* of 1844, page 176, a case is reported in which Mr. Cooper extracted a piece of a bougie coated with phosphates by the operation as for lithotomy. The patient died ten days after, probably from the diseased state of his kidneys.

In *Guy's Hospital Reports* for 1840 a case is reported by Mr. Norris. Death resulted, where the man had been in the habit for many months of relieving himself by introducing a piece of straw to draw off the water. One day, however, he unfortunately either let the straw slip into the

urethra, or had broken it off in the canal. This happened about a month before Mr. Norris saw him. In the *post-mortem*, immediately behind the prostate, calculous concretions, all joined together by the straw, were found.

Sir Henry Thompson, Surgeon to University College Hospital, in his work on *Practical Lithotomy and Lithotrity*, at page 256, gives—

CASE 10.—A mass of sealing wax in the bladder for six months which he removed (covered with phosphatic deposits) by the operation for median lithotomy. The patient having suffered for some little time with slight symptoms of stricture, he made a bougie of sealing wax and passed it into the urethra. On withdrawing it he discovered that a portion, about three inches long, had broken off and remained within. Sir H. Thompson says :—"My first impression was that this, being sealing-wax, might be easily crushed. I took the precaution, however, first to try the effect of a lithotrite upon a mass of sealing-wax placed in a basin of hot water at a temperature of 100° Fahrenheit, and discovered that it was no longer friable; the lithotrite, instead of breaking it, merely kneaded it, and became dangerously clogged. I then decided to cut him by the median method."—*March 27th*, 1867.

Snake Bite.—The Secretary read the following communication from DR. FRANCIS D. BULLEN, Visiting Surgeon to the Warwick Hospital, Queensland :—

October 9, 1866.—I was called on to go to a man bitten by a snake in New South Wales. Losing no time, I mounted my horse, taking with me some strong ammonia, powdered ipecacuanha, and some surgical instruments. On arriving at Accasia Creek I there found a powerful young man named George Campbell, aged twenty-six, five or six men holding him down, when tetanic-like spasms seized him, and then walking him about, and beating him to prevent him falling asleep. His pulse was feeble and slow; appearance ghastly pale; body clammy. When allowed to remain quiet for a few minutes he became comatose. I administered strong doses of ammonia, and rubbed the wound with ipecacuanha; all present said it was of no use, that I had come too late to save him. After the second dose of the ammonia he vomited, and in ten minutes rallied, and told me that as he was putting down a slip rail a large brown snake suddenly attacked and bit him in the shin. He at once tied his belt tightly around his leg below the knee (and above the bite), and jumping on a bare-backed horse, rode to the nearest habitation, where they scarified the wound, gave him some brandy, and sent for medical aid at once, twenty-three miles distant. The Blacks sucked the flesh about the wound, drawing the blood in a wonderful manner, without breaking the skin (better than any cupping glass I ever saw). The inclination for sleep continuing I administered more ammonia,

loosened the belt and rope that had been round the leg, and bandaged it. Ordered him not to be allowed to go to sleep for some hours, and to go on with the ammonia. Next morning I found him lively, but weak. Ordered the wound to be poulticed, and had him removed to the Warwick Hospital, where he remained under my care for three weeks with obscure symptoms of periostitis of the tibia. The wound not yielding to treatment, the weather being very warm, gradually his health was giving way, and tetanic-like spasms in the leg attacked him every evening about sundown. Morphia and quinine had no effect on him, so I ordered him to leave the hospital for change of air. Blistering seemed to relieve him most. After leaving the hospital he seemed to get stronger, but the spasms becoming intolerable I called a consultation, and on December 15th, with Dr. Margett's assistance, put him under chloroform, and made an incision of four inches along the anterior portion of the tibia, intending to trephine the bone where the fang injured it, but on closer examination I found the bone extensively diseased, and removed a large sequestrum $3\frac{3}{4}$ inches long, showing markedly the spot where the fang struck it. The wound has now healed rapidly, his health is quite restored, eats and sleeps well, no pain or uneasiness. The man had been bitten about five and a-half hours before I saw him. I only took two hours and twenty minutes to reach him. The symptoms were:—Great nervous excitement, lancinating pain, beginning almost immediately after the bite; then great prostration, and tendency to coma.

Ammonia and ipecacuanha seem to be antidotes; stimulants are recommended; brandy and ammonia combined are good, but the latter is the best. It is my intention to study the various effects more closely in the next case that I meet. There are not many recoveries after the bite of the brown snake during the coupling season, when they are most dangerous and venomous; death generally occurs in from half an hour to six hours, and always when sleep or rather coma occurs.—*April 10, 1867.*

On Amputation through the Knee-joint. By F. M. LUTHER, M.D.,
M.R.C.S. Eng.

ON the 15th January, 1866, I attended T. C., aged fifty-six, of Belleville, a labourer, who had been injured some hours before while felling a tree. I found he had sustained a bad compound fracture of the tibia, with extensive lacerated wounds of the leg; the bone was sticking out of the wound, and was broken in more places than one. The skin was also stripped off great part of the limb. I told the man, and his friends, that amputation should be resorted to, but they would not hear of it; I therefore took my leave. On the 26th I was sent for again, and told

that he had been taken to a bone-setter in Dungarvan, who removed a piece of bone and applied poultices, but who sent the man home again, after a week's treatment, to have his wounds healed. Canovan was now most anxious to have amputation performed. I found him tolerably well able to bear it, though there was some degree of fever and diarrhea. I agreed to perform the operation next day, and arranged to have the assistance of Dr. Currey, of Lismore. That gentleman met me on the 27th, and having inspected the leg we determined to amputate through the knee-joint, as the wounds extended to within an inch or two of the articulation, and the calf was swollen from inflammation. Dr. Currey was more inclined for amputating above the knee, but yielded to my wish to perform it through the joint. Having had the man secured on a table, and put under the influence of chloroform, I proceeded to make a long anterior skin flap, from which, as it was reflected back, I dissected off the patella. Laying open the joint, I divided the ligaments, and cut a short thick flap from without inwards of the calf. The tourniquet commanded the artery perfectly, as the man was very thin and his muscles relaxed. It had been applied over Hunter's canal. Dr. Currey tied the popliteal, and the loss of blood by the operation was very trifling. I should say that I first sawed through the condyles and removed an angular portion at either side. Having waited till oozing had ceased we connected the flaps by suture and wrapped wet lint over the stump, merely retained by a single turn of the roller. As a precautionary measure against hemorrhage the tourniquet was left on loosely, with instructions that it should be tightened, if necessary, until I could see the patient. The man was given a little laudanum in half a glass of wine. Next day, on removing the lint, which had been kept constantly wet, I found a good deal of swelling and a grey border of slough on the skin flap, nearly half an inch deep. The skin flap was made very long to allow for retraction. I took off the tourniquet, which had got to be rather tight from the swelling, cut the sutures to relieve tension, and applied lint dipped in a tepid solution of Condyl's disinfectant.

29th.—Constitutional symptoms good, but sloughing gradually extending; poultice of carrots and oatmeal; broth.

30th.—Grey line of slough still advancing.

31st.—Wine; opium; beef-tea; poultice as before.

The slough separated about the 5th February. There was then but little appearance of granulation upon the bone, a considerable portion of which was left exposed. However, it gradually became pink, and the granulations blended with those of the skin. It seemed very unpromising for some months, but eventually cicatrized fairly. During the autumn he fell one day and stripped the stump again.

I have not yet permitted him to use an artificial leg, which he is most

anxious to do, but I mean to allow him to essay it shortly. Probably what is called a bucket leg will be the kind best suited to his case. Considering the great mortality which attended this operation as performed by the French in the Crimea, and lately in the American civil war (the success of the latter being, however, infinitely greater than that of the former), and the rough treatment Canovan experienced in being brought to Dungarvan and treated by a bone-setter, I suppose I ought to be satisfied with the result of my operation, but I was greatly disappointed that the skin flap should slough. However, on reflection, I think this will be very likely to occur in elderly people, and that therefore the operation is unsuited for them, or if it be performed the flap intended to cover the bone should be cut from the calf. I regret having left on the tourniquet, but it was quite loose and could not, I thought, compress the stump injuriously. I think the operation a very good one where the subject is young.

The angle at which I sawed the condyles I think also contributed to strangulate the vessels of the skin-flap. The man enjoys very good health, but suffers from ennui, and is anxious to be at work. As the cicatrix is firm and hard, except in one spot, which is not bigger than the top of a writing-pen, I trust he can soon use an artificial leg.—*April 10th, 1867.*

A Case of Aneurism and Rupture of the Ascending Aorta, with Pathological Specimen. By Surgeon-Major Dr. JOHNSTON, Medical Officer, Cork District Military Prison.

THE subject of this case was a soldier thirty-six years of age, and of moderately temperate habits. He had served in the army for thirteen years, and performed a good deal of hard work during the Crimean War.

About four years ago he suffered from an attack of primary syphilis, for which mercury in moderate quantity was administered; this was succeeded by repeated attacks of secondary and tertiary symptoms, and at the time of his death he had nodes on the tibia and frontal bone.

For some months prior to his death he was in indifferent health, although not under treatment in hospital. He was pale and anemic, frequently complained of giddiness and frontal headache, and was subject to dyspeptic attacks.

On the 17th of March, 1866, he was in the act of wheeling a barrowful of coals, when he suddenly fell down dead in the barrack square.

Autopsy.—On raising the sternum and costal cartilages the pericardium was found distended, with about 10 oz. of semi-coagulated blood. The heart was of normal size, and its surface covered with a thick layer of fat. This was deposited in greatest quantity at its base, decreased in

amount towards its apex, and formed nearly one-half the thickness of the ventricular walls.

No valvular disease was present.

A fusiform dilatation of about an inch in extent had taken place in the ascending aorta, and this part of the artery was irregularly thickened by patches of atheromatous deposit. The internal coat of this portion of the artery was somewhat softened, and separated from the middle coat by this abnormal deposit, which was of a yellowish-white colour, soft, and easily broken down by slight pressure.

On slitting up the aorta a small rounded opening was found a short distance above the anterior semilunar valve. This opening was the commencement of a canal which led downwards for about half an inch between the atheromatous patches and the middle coat of the artery, and opened by a minute aperture into the pericardium, and caused death by sudden extravasation of blood.

There was no degeneration of the coats of the cerebral arteries, and all the important viscera of the body were free from disease.

This case possesses considerable pathological and practical interest, as it bears on the connexion supposed by several of the older writers, including Severinus, Lancisi, Mogagni, and others, to exist between syphilis and atheromatous deposition between the coats of arteries—a connexion more recently brought before the profession by Professor Aitken and Staff Surgeon-Major Dr. Davidson—the former in his valuable work on the “Science and Practice of Medicine,” and the latter in the Army Medical Reports for 1863.

Dr. Aitken states that he examined 26 bodies affected with syphilitic disease, and found 17 labouring under structural changes in the thoracic aorta, which he believes were dependent on syphilitic contamination of the blood. These cases are given in detail by Dr. Davidson in the admirable paper alluded to, and clearly demonstrate the relations between these diseases as cause and effect. My own experience corroborates this opinion, as several cases have recently come under my immediate observation, where comparatively young soldiers, the subjects of syphilis, died suddenly from aneurism, depending on that atheromatous degeneration of the arterial system, which in so many instances predisposes to, and causes the formation of, aneurismal tumours.

In the *post-mortem* room it is unusual to find atheroma of the arterial system under forty or fifty years of age, unless in cases previously affected with syphilis; and it is still more unusual to find comparatively young persons in civil life die suddenly from rupture of the aorta where no history of syphilitic contamination of the blood exists.

I entertain no doubt that the syphilitic poison exerts such a deterioration of the blood in the system as not only to predispose to, but to cause the deposition of, that peculiar secretion between the internal and middle

coats of the artery which constitutes atheroma, which, according to Hasse, is never transformed into cartilage, nor is deposited on the internal coats of arteries. The case published by Dr. Lewer of the R.A., in the *Army Medical Reports* for 1862, is another instance of the intimate connexion existing between these morbid conditions. If the opinion that aortic degeneration is frequently a consequence of syphilitic deterioration of the blood be found to be correct, an important practical suggestion is given to us, which we should not neglect when we examine patients labouring under any form of syphilitic disease. In such cases we should invariably examine minutely the condition of the aorta, from its origin to its termination, and ascertain its immunity from disease or the contrary, as our prognosis and treatment of the disease for which we are consulted will depend on the presence or absence of arterial disease.

To all practitioners, but especially to army surgeons, the co-existence of these diseases is of practical importance, as the early detection of an aneurismal tumour of the aorta, by careful stethoscopic examination, which may be effected in many instances long antecedent to its pressure becoming a source of discomfort, will enable the surgeon to place his patient in the most favourable circumstances for the prolongation of life, if not for the cure of the disease.

Another point of interest is observed in this case. It may be seen that the heart is covered with a layer of fat placed between its serous covering and muscular structure. This deposition is confined to the external surface of the heart, forming the first stage of fatty degeneration of this organ, but does not appear to have become interposed between, or to have caused absorption of its muscular fibres.

Neither hypertrophy nor valvular disease occurred in this case, although, owing to the elasticity and contractility of the aorta being impaired by the morbid deposition between its internal and middle coats, greater force was required by the left ventricle to propel the blood throughout the system. Usually, as is well known, when any, even slight, impediment to the blood-current through the aorta takes place, the left side of the heart becomes more or less hypertrophied, and it acquires greater propelling force.

Now, as it is evident that hypertrophy has not occurred in this heart, can this exception to the general law be satisfactorily accounted for by the supposition that the super-imposed layer of fat on the heart surface caused such an amount of deterioration of the muscular fibres as to render them incapable of increased development?

We must, I think, adopt this view, or suppose that the non-contractile and inelastic aorta presented no abnormal impediment to the arterial current.

That the former explanation is the more probable may be inferred from the fact that this patient, for some months prior to his death, was subject

to attacks of giddiness, evidencing a languid circulation, and that the brain at times was insufficiently supplied with arterial blood.—25th April.

Abnormal Growth of Bone. By DR. LAMPREY, 67th Regiment.

OF the numerous cases of diseased bone of every variety of form, noticed among the Chinese who attended the hospital at Tien Tsin, established by the British army of occupation for the treatment of poor Chinese, the case represented in the photograph was the most singular.



It was a case of elongation of the tibia and fibula of the left leg. The subject of it was a lad about seventeen years of age. For the last two years previously he had observed this leg to be growing longer than the other; and at the time the photograph was taken there was a difference of fully six inches between the length of the two legs, so that he walked with the greatest awkwardness. The leg was somewhat attenuated, and in the front part of the middle of it there was a large open ulcer resembling an ordinary varicose one. The account the lad gave of it was that he could not attribute it to any injury—that it, in short, came on of itself, and he was afraid that it would continue to grow longer, as its progress of late was not less rapid than before; that the ulcer appeared shortly after the leg began to grow.

The width of the tibia did not appear to be altered, though the fibula felt so thin that the idea of its being drawn out suggested itself. No indications of dead bone or sinus could be detected by the probe, though it was rough and irregular on its surface beneath the ulcer, and hollowed out when the surface was ulcerated. The discharge was very considerable.

He could walk and stand without causing pain in the limb, and the lad's appearance did not indicate much unhealthiness.

A short time subsequent to this case another lad, about fifteen years of age, was brought to me with a small ulcer just below the anterior prominence of the upper part of the tibia. It had originated in a small abscess, and continued to discharge for some months. There was a prominence of the granulations indicative of diseased bone, and on introducing a probe in the centre of this it grated against a rough surface.

The father of the lad was very anxious about him, and expressed his fears that he might become like the preceding case, which he had seen. Finding nothing would make any improvement, it was proposed to remove a portion of the bone under the ulcer with a trephine. This was readily assented to, and it was done accordingly. The bone, to a depth of one-eighth of an inch from the surface was removed. It was found that some enlargement of the lacunæ gave a cancellated appearance to what should have been more compact structure, but no sequestrum was found. The lad was apparently in excellent health, and after the operation the wound soon took on a healthy appearance. I was unable to learn the final result of this case, in consequence of the removal of the military forces from Tien Tsin to Shanghai.—25th April.

Case of Bright's Disease, with Hypertrophy of Heart, in combination with Atheroma of the Aorta, and Semilunar Valve Disease, in a Syphilitic Subject, with Pathological Specimens. By Surgeon-Major Dr. JOHNSTON, Medical Officer Cork District Military Prison.

A SOLDIER, forty years of age, and twenty years' service, was admitted into the Cork Garrison Hospital on the night of the 24th of April, 1866, having been discharged a few weeks previously from his regimental hospital, where he had been under treatment for chronic bronchitis.

He suffered from rheumatic and syphilitic attacks four years ago, and some weeks prior to his last admission had been invalided for Bright's disease, and the debility consequent on long-continued syphilitic disease.

For many years this patient was very intemperate in his habits, but had given up drinking to excess for the last eighteen months.

On admission he was extremely feeble; he spoke incoherently, and gave a very confused report of his illness; he passed his stools involuntarily; the surface of his body was cold, his respiration hurried, and loud, harsh, bronchial râles were audible over the entire chest. The heart's action was rapid and strong; an indistinct "bruit" accompanied both sounds, and the pulse at the wrist was rapid and easily compressed. His cough was frequent, and accompanied by expectoration

of white frothy mucus; his urine was scanty, of low specific gravity, and loaded with albumen.

Beef-tea and brandy were given in small and frequently-repeated quantities; heat was applied to his extremities, and a large sinapism to his chest.

Under this treatment he improved in a few hours; but about noon the following day he was suddenly seized with a convulsive fit, which passed off after a few minutes' duration.

A blister was applied to his chest, and a stimulating expectorant mixture of carb. ammonia, vin ipecac, tinct. scillæ, and decoct. senagæ given frequently.

No material change occurred in his condition until eleven o'clock a.m., on the 29th, when he became speechless, but continued partially conscious for two hours, and died suddenly in a convulsive fit, six days after his admission into hospital.

Autopsy eighteen hours after Death.—Muscular system attenuated; cicatrices of buboes in both groins, and of ulcers on the glans penis. Frænum destroyed by ulceration. The anterior surface of lower third of right tibia was rough and enlarged, and there was no œdema of lower extremities.

The brain was healthy in every respect; not the slightest trace of inflammatory action apparent in the membranes. About 4 oz. of transparent serum were found in the sac of the arachnoid; none in the ventricles.

Both lungs were healthy anteriorly; posteriorly they were congested, of dark colour, somewhat carnified in appearance and consistence, but were still crepitant. Both were intimately adherent to the parietes of the chest posteriorly and laterally, the connecting bands being broad and strong—the result of an old pleuritic attack, probably combined with pneumonia, from which the lungs had not completely recovered.

The mucous membrane lining the trachea and the bronchial tubes was thickened, and of a dark red colour, and the smaller branches of the latter were filled with a frothy muco-serous secretion of a reddish colour. No tubercular deposition was found in any part of the lungs.

The heart was greatly hypertrophied; the wall of the left ventricle was an inch in thickness, its carneæ columnæ very much enlarged, and the cavity of the ventricle somewhat diminished in size, with a small portion of the arch of the aorta attached; it weighed 25 oz. The aortic opening was slightly contracted and rough, and the ascending portion of the arch was considerably dilated. The valves of the aorta were thickened, closed imperfectly, and allowed regurgitation into the left ventricle. The right auricle and ventricle were dilated, but the tricuspid and sigmoid valves were quite healthy.

There were numerous patches of atheromatous deposit between the

internal and middle coats of the aorta throughout its entire extent, and were continued for a short distance into the common iliac.

The liver was slightly enlarged, but healthy in structure. The spleen was of normal size, but extremely soft and friable, and weighed 6 oz. The kidneys were slightly contracted in size—the left more so than the right—and were well marked specimens of granular degeneration of these organs; the right weighed $4\frac{1}{4}$ oz., and the left 3 oz. The capsules were thickened and easily torn off the cortical structure. This had a mottled appearance, and was rough to the touch, in consequence of the copious albumino-fibroid deposition on its surface. On making a section of each kidney from its convex edge to its hilus, this deposit was found to be of firm consistence, of a whitish-yellow colour, and penetrated in considerable quantity between the tubular cones, compressing and nearly obliterating them altogether at some points.

On the anterior surface of the right kidney there was a small cyst, which, when opened, contained a thin whitish fluid in a smooth dense membrane embedded in, and closely adherent to, the substance of the kidney. A similar, but much larger cyst, was situated close to the upper part of the hilus, and was left unopened for the inspection of members.

None of the large serous sacs contained fluid, nor was there any effusion into the cellular tissue of the extremities.

The history of this case, taken in connexion with the pathological changes apparent in the morbid specimens before the Society, affords another instance of the relation which frequently exists between syphilitic contamination of the blood and the atheromatous deposition between the coats of the aorta, which so often, at least in military life, predisposes to the formation of aortic aneurism. This subject I ventured to bring under the consideration of the Society at our last meeting, in consequence of its assumed practical bearing on the treatment of syphilitic and aneurismal disease.

A marked discrepancy was found to exist between the force of the cardiac action and the character of the pulse at the wrist, the former being comparatively strong, the latter feeble and easily compressed. This condition was owing, probably, to the combined influence of narrowing of the aortic orifice, imperfect semilunar valves, and the rigid inelastic condition of the aorta dependent on the extensive deposition of atheroma between its coats throughout its entire extent, and exemplifies the necessity of examining the volume, strength, and rapidity of the blood-current in the radial artery by digital pressure, as well as the force and frequency of the heart's action by the stethoscope, before we can accurately ascertain the character of the circulation, and through it the vital powers of the patient.

When we take into consideration the existence of long-continued disease of the kidneys in this case, and that the secreting portion has

been almost obliterated by the albuminoid product, we can readily account for the greatly diminished quantity of urine secreted; the impaired mental condition of the patient on admission; the occurrence of the convulsive fit the day following; and the supervention of partial coma, as these phenomena constitute the most frequent precursors of death from uræmic poisoning in fatal cases of the chronic form of Bright's disease.—*May 9, 1866.*

Case of Fever. By Dr. W. JACKSON CUMMINS, &c., &c.

Few subjects are more difficult than the study of fever, as its ever-varying character and type render all attempts at generalization more or less imperfect, and make each case met at the bedside a study in itself.

The question of the identity or diversity of typhus and typhoid has been much debated, and is not yet quite settled, while a new question has arisen as to whether, when the symptoms of both diseases are present during the course of fever, they arise from the same cause, or from the co-existence of two poisons in the system; whether, also, when the symptoms of typhoid occur during convalescence from typhus, or *vice versa*, the last attack should be looked upon as a relapse, or as the development of a distinct disease, the poison of which had lain dormant during the first attack.

An interesting specimen was exhibited at the Pathological Society of Dublin last session by Dr. H. Kennedy, taken from a patient who presented, he says, "three distinct stages of fever. During the first eleven days the symptoms were those of typhus; in the second stage, lasting seven days, enteric fever was present, with the characteristic spots; while the third, lasting nineteen days, was marked by a copious rash, and all the symptoms of typhus." The morbid pathology was that of enteric fever.

Dr. Duncan also read a case before the Medical Society of the College of Physicians, in which, with an ambiguous rash, and complete absence of ileo-cecal tenderness and diarrhea, in a case which was only a week recovered from typhus, two patches were found after death, in which Peyer's glands had sloughed away, leaving the muscular coat underneath smooth and bare.

The following case, although unmarked by eruption, has some bearing upon these questions, and therefore I shall read detailed notes of it, in order to provoke the discussion of an important question, and elicit the opinion of the Society.

Miss —, aged twenty-five, had been feeling poorly for some weeks, but passed through her catamenial period naturally about a fortnight before the 21st of December, when she became feverish, and had to take

to her bed on the 23rd, suffering from cough, dyspnea, and bilious vomiting, with some headache. These symptoms lasted until the 28th, when I was sent for, but not being at hand, Dr. Callaghan was called in and prescribed for her.

On the following day I saw her, with Drs. Callaghan and O'Connor. She was then suffering much from dyspnea and dry cough, with physical signs similar to those of asthma; skin cool; pulse 80; tongue covered with a thick brown moist fur; thirst; constant bilious vomiting; no abdominal nor hepatic tenderness, fulness, nor pain; bowels confined for two days; urine scanty, and high coloured, with red deposit; some headache; insomnia for several nights; much nervous excitement of a hysterical character, and a firm conviction on her mind that she is going to die. Two pills, containing blue pill, colocynth, and henbane were prescribed, and a mucilaginous and diluent diet.

31st (11th day).—Spent a good night; bowels have been well opened; vomiting has almost ceased; pulse 80; skin cool, but tongue is still much furred, and the asthmatic symptoms, though relieved, still continue.

She was ordered a sinapism to chest, and three grains of blue pill, with half a grain of extract of stramonium, at bed-time; milk and soda water diet.

January 1st (12th day).—Spent a good day and night, but appears flushed; pulse 100; skin rather hot; tongue much less furred. The chief complaint is of a peculiar sort of sour taste in the mouth which is very distressing; bowels natural.

2nd (13th day).—Vomiting has returned, and pulse has risen to 112. There is a bright flush on each cheek, and the conjunctivæ are whiter and brighter than natural. The temperature of the body is high. The sour taste in mouth is still her chief complaint. The tongue is now covered with a thin white moist coat. There is no abdominal tenderness nor diarrhea. Headache much complained of. She did not sleep, and was delirious during the night. About noon the bowels suddenly acted violently, the discharge being principally fluid blood of a horribly fetid odour. Again and again a similar discharge occurred, each one being more purely sanguineous than the last, until she had lost some pints of blood.

When we saw her in the afternoon she was blanched and extremely feeble, but there was no decided tenderness over any part of abdomen; no tympanitis; no gurgling, at least as far as could be ascertained from the very cautious examination which dread of increasing hemorrhage permitted us to make.

Gallic acid, with sulphuric acid, were prescribed, and an enema of acetate of lead; five grains each of hyd. c. creta and Dover's powder at bed-time; bladders of ice to the ileo-cecal region; iced drinks and lumps

of ice to be swallowed. During the night, as the stomach was very irritable and rejected the acids, she was given three doses, containing ten drops each of turpentine, which were retained. Notwithstanding all these means the hemorrhage continued during the night, and the following morning (14th day) we found her very anemic and feeble. Pulse weak, small, and regular—120. She lay in one position, unable to move or speak; breathing still asthmatic; tongue white and moist; more than a pint of urine was drawn off by catheter; two grains of acetate of lead and a quarter grain of opium were prescribed every third hour; eggs and port wine *ad libitum*.

Afternoon.—Hemorrhage has ceased, and she bears nourishment well; urine drawn off.

January 3rd (15th day).—Spent a good night, and appears better and stronger; no hemorrhage nor diarrhea since; tongue moist and cleaner; has passed urine; she has taken five raw eggs and half a bottle of port wine since yesterday morning, and borne them well. Omit all medicine and eggs; reduce the quantity of wine; milk and rice water diet.

Afternoon.—Reaction has set in; pulse 120, jerking; skin hot; delirium; urine drawn off.

January 4th (16th day).—No return of hemorrhage; reaction continues violent; was delirious during the night; slept little; complains of headache; dyspnea has increased; pulse 120; no vomiting; tongue cleaner and moist. Omit wine.

January 5th (17th day).—Pulse 120, jerking; skin hot. There have been no maculæ of any kind. A dark-coloured formed fetal discharge has been passed. To have small doses of nitro-muriatic acid, and five grains each of hyd. c. creta, and extract of hyosciamus at bed-time.

January 6th (18th day).—Delirium has been of a more violent character; tongue whitish and very dry; one cheek more flushed; breathing rapid and asthmatic; passes urine involuntarily; much tremor of hands, and some muttering; can be roused to consciousness, and then readily protrudes tongue, which trembles much. Pulse has a sharp jerking character; 120. To take ʒvi. of wine every four hours, and a wine-glassful of beef-tea between each dose. To take half an ounce of castor oil and have turpentine applied to chest. Omit the acid.

Evening.—So much debility was present that wine had to be increased to ʒii. every fourth hour.

7th (19th day).—Very delirious; no sleep; skin hot and dry; tongue dry, brown, and furred; breathing rapid, and accompanied all through chest with sibilant râles. Pulse 124; much tremor of hands and tongue, with great debility; urine and feces passed involuntarily, the latter of a lighter colour than before.

Evening.—Tongue brown, dry, tremulous, and retracted; skin hot and dry; pulse 136; some subsultus. To have three grains of hyd. c. creta and five grains of nitre at bed-time.

8th (20th day).—Spent a sleepless, delirious night; much sordes on teeth and lips; subsultus has increased, and debility is excessive. To have $\mathfrak{z}\text{i}$. of wine every hour, and $\mathfrak{z}\text{ii}$. of beef-tea every second hour; blister to occiput and nape.

Evening.—Had two convulsions during the day, and debility was so extreme that she required two or three doses of brandy. Pulse varies from 126 to 136. Half a pint of turbid ammoniacal urine was drawn off, and feet and loins fomented with mustard. To have wine as before, brandy when necessary, and strap blisters all over the head.

9th (21st day).—All the bad symptoms continued to increase until morning, when a copious warm perspiration appeared, and she fell into a semi-comatose state; the subsultus entirely subsided, and her friends thought that she had entered upon a favourable crisis, and very properly reduced the quantity of stimulants. At our visit we found her semi-comatose, tongue still thickly furred with quantities of sordes, but now moist; skin hot and perspiring; extremities warm; pulse 148, hard and jerking; respiration 52; blisters have risen well on head and neck. A few ounces of urine were drawn off, and wine continued in reduced quantity, but coma gradually deepened; pulse rose to 160; respiration became more rapid, and she gradually sunk, retaining the heat of body and extremities to the end.

There were three groups of phenomena in this case, the first of which may be called nervous, marked by bilious vomiting and spasmodic asthma (both probably caused by the action of fever poison on the pneumo-gastric nerve), nervous excitement, cool skin, and quiet pulse. Her general appearance during this time was not that of typhus, as the dusky heavy countenance of that disease was quite absent, while the clear eye and bright hectic flush of the cheeks betokened rather the advent of the abdominal lesion which occupied the mid period of the fever. The third group of symptoms were unmistakably those of typhus ushering in the crisis of that disease on the 21st day.

It seems to have been a mixed, or, as Dr. Hudson denominates it, a "hybrid" case of fever; for, although so many of the symptoms of typhoid were absent, it certainly presented some of the characteristics of that disease; and it may be stated that two cases of enteric fever occurred about the same time in the locality. The absence of eruption of any kind makes the case very obscure, but we know that both typhus and typhoid may exist without maculæ of any kind.

The doctrine of Hunter, that no two morbid poisons can exist at the same time within the system, influences the minds of many, even to the present day; but the observations of Dr. Murchison and others have proved this opinion to be incorrect, for it has been shown that measles, typhoid, and typhus, may co-exist; and I have myself noted a case where a patient hardly convalescent from scarlatina was vaccinated too late to

prevent contagion from small-pox, the vaccine vesicle and variolous eruption appearing simultaneously, affording a probability that the scarlatina, the vaccini, and the variolous poisons had been in his system at the same time.

Dr. Aitkin, who in the first edition of his classical work, expressed himself in favour of the identity of typhus and typhoid fever, brings forward, in his second edition, the mass of evidence to the contrary, which had meantime made him a convert to the now more generally received opinion that they differ both in their etiology and symptomatology. Dr. H. Kennedy, on the other hand, who was "one of the first to recognize the difference between the typhoid of Paris and our typhus," has, within the last six or seven years, written three papers to prove that "the two fevers known as typhus and typhoid are the result of a single poison; while the distinguished President of the Medical Society of the King and Queen's College of Physicians (Dr. Stokes), when commenting on the last of these papers, expresses himself in the following manner:—"Without denying that a well-marked case of typhus differs from an equally well-marked example of typhoid, I confess that I have long inclined to opinions similar to those of Dr. Kennedy, as opposed to the views of some of the London and American observers, the difference and conditions of receptivity may account for one man getting typhus and another typhoid from the same poison; and it is often seen in our hospitals that when a whole family are together in the wards, every variety of fever may be seen among them. It is more than *probable that the one exciting cause* affected all.

"Dr. Kennedy has shown what all must admit, that enteric symptoms may exist with a petechial rash; and though I am not here to advocate or condemn his views, it will be admitted that they deserve the most grave consideration."

Dr. Hudson, in an appendix to his valuable work on the *Study of Fever*, which has lately appeared, brings his vast experience and close reasoning to bear on the arguments of Dr. Kennedy, answering each one in detail. Nevertheless, I cannot help thinking that if two poisons are always in existence in mixed cases of typhoid and typhus, they are poisons which can pull together more harmoniously, and exist together less exceptionally, than scarlatina, measles, or variola can with typhoid, typhus, or with each other.

A Contribution to the Pathological Anatomy of the Ear. By M. V. ODENIUS
Translated from *Medicinskt Archiv*, Band III., No. 4. Stockholm,
1866, by WILLIAM DANIEL MOORE, M.D., Dub. et Cantab.;
M.R.I.A.; Honorary Fellow of the Swedish Society of Physicians,
of the Norwegian Medical Society, and of the Royal Medical Society
of Copenhagen; Secretary for Sweden, Denmark, and Norway, to the
Epidemiological Society of London.

I. *On a Way, hitherto little attended to, by which Morbid Processes may be Transmitted from the Middle ear to the Cavity of the Cranium.*—The immediate cause of the following observations was a case interesting in both a forensic and a pathological point of view, which occurred in March, 1863, in the pathological dissecting room at Lund. The cause of death was proved to be abscesses of the brain, depending on internal otitis of the left side, with caries, one of which abscesses, near the base of the cerebellum, as is so often the case, proceeded from the corroded tegmen tympani. For shortness sake I shall, however, pass over both this and the other morbid changes met with, dwelling only upon that which is directly connected with the subject before us, namely, a smaller abscess in the left hemisphere of the cerebellum. From this abscess a narrow passage leads through the cerebral substance forward towards the posterior surface of the petrous bone as far as the non-perforated dura mater. The place where the passage reaches the dura mater corresponds to the “vascular foramen situated without and somewhat above the opening of the internal meatus auditorius” (note of the dissection), in the orifice of which lies a small purulent mass; immediately around this, moreover, the dura mater is separated from the bone, and somewhat thickened; at some distance upwards it is also infiltrated with pus.

The “vascular foramen” in question is described in most anatomical works, and is usually designated simply as the opening of a diploic canal, or as destined for the transmission of a small vein (Krause, Weber, Froriep, Wilson, &c.) Some authors, however, at the same time pay some attention to the mode of its formation. Thus Henle (*Knochenlehre*, pp. 142 and 151) describes it as follow:—At the side of the porus audit. int., and nearer to the upper margin of the petrous portion is found a blind depression, resembling a cicatrix drawn in and with the entrance turned to the apex of the pyramid, an incompletely filled hole under the superior perpendicular semicircular canal. In the new-born child there is found under the superior anterior semicircular canal a deep hole, filled only with cartilage, with an opening having a middle direction, which hole, even in the adult, is not completely obliterated. R. Wagner, too (Sömmering, p. 55), designates the hole or chink in question as a track left by dura

mater, which in the child passes into a blind hole beneath the superior semicircular canal—Conf. also Huschke (Sömmering), p. 900.

An examination of a human fetus of from 20 to 25 centimètres (from nearly 8'' to nearly 10'') in length—the youngest I had at my disposal for this purpose—shows, that at that time both the external and the posterior semicircular canals still consist partially of cartilage, while the superior is already ossified throughout its whole extent. This last-named semicircular canal is on its medial side still free,—not as in the adult imbedded in an investing bony mass—and beneath it passes a hole or depression, which consequently turns its opening, in a medial direction, deeply into the cartilaginous mass situated within and above the outer semicircular canal. The depression is filled with a vascular process from the dura mater, and from it even very considerable vessels extend into the cartilage. During the progressive ossification this depression just mentioned gradually fills up; though this takes place, not uniformly from all sides, but principally from the bottom and from the anterior circumference, so that the depression, even in the new-born child, is in general rather shallow, and is situated more posteriorly under the posterior half of the superior semicircular canal. As age advances, the filling bony mass gradually increases, and appears also on the inner side around the superior semicircular canal, so that soon, in children of one and a half or two years, the medial circumference of the semicircular canal just mentioned is completely covered with bone. Of the former depression there now remains only a chink varying in width, which afterwards becomes gradually narrower, until it has assumed its permanent form of a narrow canal, leading out from the interior of the bone, and opening with a somewhat wider orifice upon its surface.

The mode of development now described explains, on the one hand, the irregular, cicatrix-like form of the outer opening of the canal, as well as why this opening, although varying considerably in its position, is found in most cases on the posterior surface of the pars petrosa, and on the other, the position, the slight variation in width, and the other circumstances of the canal itself. This canal goes in fact as nearly as possible laterally towards the centre of the superior semicircular canal, or, most frequently, somewhat behind it, and there enters into open connexion with the wider or narrower osseous cells which pervade the bony mass filling the space between the external and superior semicircular canals, and which on its side communicate freely with the antrum and mastoid cells. If, as is very often the case, the filling up mass surrounding the semicircular canals is everywhere spongy, the canal in question may immediately on the inner side of the superior semicircular canal open into bone cells, whereby it enters in a still shorter way and almost directly into connexion with the upper part of the proper cavity of the tympanum.

If we reflect further that this canal, which protects a vein, is not un-

frequently so wide as to admit an ordinary bristle, we might even *a priori* feel justified in concluding, that in many cases of processes combined with the formation of pus in the middle ear, it might form a comparatively easy route for their further transmission. Besides the above case, one described by Lebert, if I do not interpret it incorrectly, affords proof of the justice of this conclusion. His words are: (Ueber Entz. der Hirnsinus, Virchow's *Archiv*, Bd. 9, p. 414):—"On the posterior surface of the right petrous bone, externally to the meatus auditorius internus, the dura mater can be very easily separated from the rather uneven bone, and in this place is found a small jagged opening, communicating with the cavity of the tympanum, which through partial destruction of the labyrinth is destroyed, and filled with thick, purulent detritus."

Some time after I had communicated the above case (in October, 1864) to the Physiographical Society in Lund, I found another described by R. Voltolini ("Sections Yrgebnisse bei Schwerhörigen und Taubstummen" (etc. Cas. 2. Virchow's *Archiv*, Bd. 31, 1864), which presents great similarity to it in reference to the point specially under consideration. In his remarks upon the case, to which I would refer the reader, Voltolini directs particular attention to this "way, which has hitherto been completely overlooked," and also gives a detailed description of the formation I have spoken of, agreeing in every essential point with that above given.

II. *Abscess in the Cerebellum in Connexion with Affection of the Ear.*—C. R., a saddler, aged forty, admitted into the hospital of Lund on the 3rd November, 1864, died there on the 13th December. His body was submitted to *post mortem* examination on the 16th of the latter month.

The note-book states that in the month of July in the same year the patient was said to have got "a violent blow on the forehead, but that he had not observed any inconvenience from it." Many years ago, without any assignable cause, he had heard badly with the left ear. Otherwise his health was good, until about three weeks before his admission into hospital, when he "got repeated shiverings, pain in the head, particularly over the forehead, and in the right ear, with singing in the latter." His appetite disappeared, he had a bad taste in his mouth, nausea but no vomiting, a feeling of oppression and tenderness in the epigastrium; the bowels were torpid. "When he sat up in bed a mist came over his eyes. In consequence of the pain and singing in the ears just mentioned, he is hard of hearing also in the right ear, but no change in it, nor discharge from it, is perceptible."

During his stay in the hospital the most prominent symptoms were:—Constant pain in the right ear and in the forehead; which pain, however, towards the close of November, changed to the back of the neck, "where as well as behind and beneath the ear, great tenderness is found even on superficial pressure, though greater on deeper pressure," causing the patient for a long time to keep his head motionless; sometime later the

pain was felt more within the head. The appetite was slight; in December vomiting after food set in. Constant obstruction. The pulse at first was from 60 to 80, subsequently its frequency was rather increased. The temperature ranged from 37.5° to 39° (99.5° to 102.2° F.) Increasing loss of power. Pupils of equal size, not dilated. No paralysis in the muscles of the limbs, face or eyes. Intelligence not disturbed, but possibly giving way a couple of days before death.

The report of the dissection contains with respect to the parts in question:—*Head*.—Dura mater in a state of considerable tension, and its blood-vessels rather congested. The fine membranes of the brain tolerably dry both to the touch and in appearance, but without exudation. The ventricles, particularly the right, distended and filled with a perfectly colourless and clear fluid. In the antero-inferior part of the right lobe of the cerebellum was found a well-defined abscess, as large as a pigeon's egg, filled with greenish-yellow, thick pus; the parts immediately surrounding this were rather softened, and on one side were broken up into a blackish, loose matter. The other parts of this lobe, as well as the left lobe, were in appearance tolerably healthy, though the white substance was perhaps somewhat yellowish, and the mass was in general somewhat loose. In the part of the petrous bone, on which the abscess mentioned rested, the bone was, through a circuit of some lines, carious and changed into a dark, pulpy mass, over which the dura mater was dark and rather loose, which was the case also with the parts of the soft membranes found over the abscess. Both in the petrous portion and in the mastoid portion were found sinuosities filled with pus, and communicating with the external meatus auditorius.

It was not until a week after the *post mortem* examination that I had an opportunity of investigating the state of the right organ of hearing, which had in the interval lain out in tolerably severe frost. In the removal the bone had been in some measure injured, the saw having posteriorly taken away the edge of the semisulcus petrosus inferior and the processus interjugalris, and further outwards, where the section went about through the synchondrosis petro-basilaris, also the posterior part of the sulcus sinus transversalis. Moreover the cartilaginous portions of the Eustachian tube and of the meatus audit. ext. were wanting. On the posterior surface of the pars petrosa was found a corroded irregular depression, surrounded by uneven edges, somewhat undermined at the upper and inner circumference. The greatest length of this depression is 16 mm. ($\cdot 62992''$) and lies almost horizontally, the greatest vertical extent (so far as it can here be determined) is 10 mm. ($\cdot 39370''$), and the greatest depth, in the upper part of the depression nearly 4 mm. ($\cdot 15748''$). The upper margin of the depression is at a distance of 7 or 8 mm. from the upper edge of the pars petrosa; externally it reaches to within 1 or 2 mm. of the sulcus sinus transv., internally

it is about 7 mm. (.27559") from the outer margin of the porus acoust. int.; inferiorly, the boundary cannot be accurately defined. It therefore occupies the seat of the outer orifice of the aqueductus vestibuli with its surrounding parts. The depression is filled with greenish-yellow pus, after the removal of which the fundus is seen partly covered with bright-red granulations, and is rendered uneven by low projecting angles of bone; in the interior are found also white firm filaments of connective tissue strongly attached to the bone, from their position apparently remnants of the process of the dura mater penetrating the aqueduct. Around the depression, especially at the upper and inner part of its circumference, and in and on the porus acoust. int., the posterior surface of the pars petrosa is of a bright red, with a coarsely radiating injection. The nerves situated in the porus acoust. int. are of a pale rosy red colour. In the part of the sinus transversus remaining on the preparation no change is perceptible.

After the bone had been cut through in a plane coinciding as nearly as possible with the posterior semicircular canal, and the vestibule with the superior semicircular canal had been opened, it appeared that no communication existed between the depression above described and the labyrinth, but that the compact bony mass in and around the labyrinth was of a similar rose red colour, the deepest colouring being in the neighbourhood of the depression, and slighter colouring anteriorly, so that towards the cavity of the tympanum the bone had nearly its natural colour. The contents of the bony labyrinth were so far altered, that the fluid found in it, although clear, was in the posterior semicircular canal reddish, in the vestibule and superior semicircular canal yellowish. The external semicircular canal and the cochlea could not be examined without too great injury to the preparation. Instead of the delicate filaments, which normally attach membranous to bony canals, there were found in the whole of the posterior, in the common, and in the nearest portion of the superior semicircular canal, as well as in the greater part of the vestibule, abundant collections of connective tissue. The membranous formations are here also thicker in the walls than usual, a condition which can be demonstrated also in the external membrane of the canal which was taken out. The membranous labyrinth otherwise presents in form and connexion no change perceptible to the naked eye.

In the outer part of the fundus of the depression the spongy bony substance between the inner circumference of the sulcus sinus transv. and the labyrinth is opened, and the cells situated there are filled with pus. Through the entire proper mastoid process, on the contrary, the cells, as well as also the antrum mastoideum, are perfectly free from pus, but the mucous membrane in the cells bordering on the affected part is considerably swollen and thick, which swelling diminishes towards the periphery of the bones, so that the great cells in the very apex of the mastoid

process seem little or not at all affected. Although from the depression we can in many places with a needle penetrate to the proper mastoid cells, the pus has not succeeded in extending to these, which evidently depends upon the fact, that the swollen investment in these, in themselves rather narrow cells, cuts off the connexion with the above.

The cavity of the tympanum is likewise perfectly free from pus, but its mucous membrane is thick and softened. The bones of the ear are unchanged in connexion and mobility, and no adhesions are found between the parts. The membrana tympani also seems somewhat softened, and exhibits a great oblong hole extending from the point of the handle of the malleus to the annulus fibrosus. Judging from the form of this hole and the appearances, we may, however, with all probability assume that it did not take place until after death, and it is probable that during the time the preparation lay exposed to the cold of Winter, the frozen membrane could not resist the increased atmospheric pressure from without. The external meatus exhibits nothing abnormal.

My sole object has been to give as accurate a description as, under present circumstances, was possible, of this interesting, and, with reference to the connexion between cerebral abscesses and affections of the ear, instructive case. I will, therefore, add only, that the investigation now reported appears undoubtedly to show, that the morbid process did not originate in the organ of hearing, but that the latter was only secondarily affected. The primary disease must consequently be sought behind it, in an affection either of the periosteum over the region of the aqueductus vestibuli, or of the cerebellum, with consecutive formation of abscess. Which assumption ought to be adopted, it cannot, however, in this instance, be easy to decide. But, under any circumstance, the case before us exhibits anatomically an ulcerative process in the pars petrosa, struggling outward from the cerebral cavity towards the middle ear, and which had already advanced so far, that no long time was probably needed for the pus to make a way for itself to the antrum mastoideum and the cavity of the tympanum, after which the membrana tympani formed the only obstacle, and one easily overcome, to its discharge through the external meatus. Nor, on the other hand, does the altered and "tolerably loose" part of the dura mater and other membranes of the brain, which constituted the partition between the cerebral abscess and the caries going on in the pars petrosa, seem to have required long to be broken through, whereby a connexion between the cerebral abscess and the external meatus would have been opened, but the occurrence of which, if it actually was brought about, would probably have been more difficult to explain, than the intermediate stage we here lighted upon.

III. Extreme Attenuation with Formation of Holes in the Inferior Wall of the Tympanum—Constriction of the Fenestra Cochleæ.—The changes here re-

ferred to were observed accidentally in a petrous bone, which with a part of another was preserved as material for preparations of the ear, and consequently without any knowledge of the symptoms with which they were attended during life. Although I am ready to admit that such descriptions of pathological preparations must possess a merely subordinate value in comparison with cases, which have been observed also during life, it seems to be going too far to deny, as has been done in some quarters with respect to the pathological anatomy of the ear, that they have any importance whatever. It is under this conviction that I hope that the following brief description will not be entirely devoid of interest or value.

As is well known, the inferior wall or fundus of the cavity of the tympanum is normally very narrow, is longitudinally more or less excavated, and lies with its deepest part somewhat lower than the sulcus tympani. It most frequently appears uneven from low angles of bone, which form small irregular cells. On section it is found to be, in different individuals, of very varying thickness, and not unusually very thin and transparent. Sections show further, that the deepest part of the fundus of the cavity of the tympanum, or the region below the promontory, corresponds to the arch of the fossa bulbi venæ jugularis, so that the intervening bony wall forms at once the floor of the one and the roof of the other cavity, a circumstance to the practical importance of which, with reference both to embolic formation in the jugular vein, and to hemorrhage from the same, Toynbee first, and after him, Tröltsch, directed attention.

In the preparation I am now speaking of, belonging to the left ear, the bony wall in question is not merely as thin as paper, and on its upper or tympanic surface perfectly smooth, but is at the same time pushed up into the cavity of the tympanum by the fossa bulbi jugul., which appears unusually deep, so that the bottom of the cavity, instead of being excavated, forms a longitudinal rounded elevation. This elevation is so considerable that it covers the inferior part of the promontory and the greater part of the fenestra cochleæ, and slopes outwardly towards the sulcus tympani. Corresponding to its situation so high up in the tympanum, this lower wall has, of course, an unusual breadth, reaching, at the broadest part, to more than 4 mm. (·15748''). The change is, however, not confined to a general attenuation and elevation of the bony lamina already mentioned, but in two places amounts to actual perforation of the same. Of the holes so formed, which are closed only by membranous parts, the one is 3·3 mm. (·129921'') in length and 0·8 mm. (·031396'') in breadth, and lies near, or rather in, the very sulcus tympani, so that the membrana tympani seems to have been in part attached to it. The other hole is tolerably round, 1·5 mm. (·059055'') in diameter but with cut edges, and is situated in the highest part of the elevation, immediately external to the fenestra cochleæ and below the outer extremity of the fenestra vestibuli ;

the two holes are therefore situated, each on its side of the elevation, in the vicinity of its junction with the lateral walls of the cavity of the tympanum. In consequence of the elevation, too, as has already been stated, the fenestra cochleæ has been for the most part closed from without, so that only in its upper part does it leave a passage for an ordinary bristle. No changes can be discovered in the bony labyrinth.

As no perceptible change was met with in the investing mucous membrane, there was no reason to assume that the person should have experienced any actual injury from the attenuation in question, but the preparation exhibits only an anatomical arrangement of the parts, which, in case of the occurrence of an inflammatory or carious process in the cavity of the tympanum, might easily, in consequence of the slightness of the obstacle to the passage into the jugular vein, have led to the most dangerous results. On the other hand, there can be no doubt that the constriction of the fenestra cochleæ, which, as the mucous membrane was found remaining, amounted to an actual obliteration, so that it could not be discovered from without, must have had an essential influence upon the person's hearing.

IMPORTANT LETTER TO THE PRESIDENT, VICE-PRESIDENTS,
GOVERNORS, AND GUARDIANS OF THE LYING-IN HOSPITAL.
By EVORY KENNEDY, M.D.

MAY IT PLEASE YOUR EXCELLENCY, MY LORDS AND
GENTLEMEN,

The great Institution confided to our guardianship, which has, for upwards of a century constituted an ornament, and, as the first of the kind, a source of justifiable pride to our city, requires to be remodelled. The time has arrived in which, like all human institutions, progress and changing circumstances have produced such an influence upon it, that neither the intentions of the founder, the wants and just rights of the public, nor the claims of humanity, by securing the greatest preservation of life, are accomplished by its instrumentality. These considerations have so long pressed upon me—considerations, strengthened by my occupations and habits of thought, and so confirmed by a connexion of nearly forty years with this Institution in the various capacities of pupil, assistant, master, and governor, that I venture to hope no excuse is required for my present intrusion.

The preamble of the charter sets forth its objects as fourfold. First, that of preserving the lives and relieving the miseries of