will endure for some days. This effect is due to the circumstance that nearly all such nerves contain vaso-motor fibrillæ, and is owing to the dilating influence of the galvanism on the vessels to which these vaso-motor filaments are ultimately distributed. Therefore, while the application of the electric current will tend to restore the motor power of the muscles to which it is applied, it will at the same time perpetuate, if not increase, the already existing congestion of the middle ear.

This, I take it, is the reason why deaf patients subjected to the treatment in question fail to afford results proportionate to the restoration which we know has accrued in the muscle-power of the tube in consequence of their successful electrification.

Obviously, therefore, the question of the use of electricity in a given case of ear-disease is one not to be decided without due deliberation and the exercise of considerable discrimination. These are points on which, doubtless, much information will be elicited from the discussion of the subject. Other points, respecting which the experience of each practitioner will give valuable hints, are, the kind of current suitable to the case to be treated, whether the continuous, the interrupted, or the induced current; also the strength of the current and the frequency of application. Speaking on these points from my own experience, I may say that I have nearly abandoned the constant battery for therapeutic purposes, and use most frequently a very weak induced current, and never repeat the application oftener than once a week.

Respecting the instruments necessary for the purpose, the simpler they are the better, providing efficiency be not sacrificed to obtain this end.

Galvanisation of the tensor tympani muscle with certainty can be best accomplished by means of Weber-Liel's intratubal electrode. It consists of a delicate gum-elastic catheter, which is introduced into the Eustachian tube to the desired length through an ordinary catheter. Through it runs a platinum wire, which is exposed for a short space near its distal end by means of an opening at the side of the elastic tube. The near end of this wire is attached to a ring, to which the cord communicating with the battery is hooked. The other pole can be applied by means of a sponge-holder either to the mastoid process or an indifferent part.

It has been objected by Burnett, that the benefit resulting from the above procedure arises from the mechanical effect of the intratubal electrode acting as a bougie, rather than to the electricity applied through its means. Practically, I have found some difficulty in introducing Weber-Liel's instrument, from its exceeding pliability. Others, however, may have been more successful.

For galvanising the extratubal muscles I have long used a very simple electrode, consisting of an ordinary vulcanite catheter tipped with a metal rim, to which, inside and isolated by the vulcanite tube, is attached a wire, which at the opposite end joins a ring for connection with the battery. With this the remote portions of the tensor palati can be readily reached. The circuit is completed by the sponge-holder applied to the mastoid process. I have occasionally got very good results from this arrangement as regards increase of hearing power; and, as there can be no question of this instrument acting as a bougie, for it certainly does not get beyond the mouth of the tube, such improvement may fairly be attributed to the influence of the electric current. So far as this fact goes, it would seem to weaken Burnett's objection to Weber-Liel's instrument.

Looking to the important part which the tensor palati muscle plays in securing the functions of the Eustachian tube, it being the principal dilator of this canal; and seeing that the section of this muscle after leaving the hamular process is readily accessible on the anterior surface of the soft palate; and seeing that it is chiefly to paresis of this muscle that those objective signs of paresis of the palate are due, to which reference has been made,—it is my frequent practice to galvanise this muscle through the mouth—a proceeding which is very easy of performance. For this purpose, I use an ordinary laryngeal electrode, but somewhat larger than this instrument is now made; applying it over the soft palate in the course taken by the muscle on each side of the uvula, the circuit being completed by placing the sponge-holder attached to the other pole over the mastoid process of that side corresponding to the side of the palate to which the laryngeal electrode is being used.

At the last sitting of the select council on the Artisans Dwellings' Act, the medical officer of the parish of St. George's-in-the-East, stated that in a district between the London Docks and the Thames there were houses, occupied by the lowest form of labourers, with only two rooms, in which as many as twelve persons were living. In others there were six in two rooms of about 750 cubic feet each. The death-rate in the worst part of this district was thirty-one per 1,000, and the rate all over the district was 25 per 1,000.

TWO CASES OF STRANGULATED HERNIA: WITH SOME NOTES ON THE OPERATION.*

By PAUL W. SWAIN, F.R.C.S.,

Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

I HAVE selected strangulated hernia as the subject for a paper, partly because, within the last fortnight, two cases presenting some peculiarities have occurred in my practice, and partly because it is a subject of such universal interest, that few members of our Branch can fail to contribute material information during the discussion which, I trust, will follow the reading of this paper.

On December 22nd, I was asked by Messrs. Miles and Stamp of Plympton to see a lady, aged 55, with symptoms of strangulated femoral hernia. On the previous day, she had been quite well up to the time of her late dinner, when, after a fit of coughing, she was seized with sudden pain in the abdomen, and vomiting. She also had an idea that, shortly before, she had strained herself by lifting a heavy music-book. She was seen at once by Mr. Stamp, who found that she had a tense and painful swelling in her left groin, which he naturally concluded to be a hernial protrusion. Up to this point, the case seemed clear; but here came in a bit of previous history, which at once introduced an element of grave doubt. Two years ago, this lady had been engaged in selling at a bazaar, and had been standing about more or less all day. The next day, she complained of pain and swelling in her left groin, accompanied with sickness. The medical man, under whose care she then was, considered that the swelling was due to an enlarged gland; and she was treated for some weeks by rest and iodine. As to whether the swelling had ever entirely subsided from that time to the present, there was no clear history. I arrived on December 22nd, at 5.30 P.M., just twenty-four hours after the primary attack of pain and vomiting. Her pulse and temperature were both normal, her countenance tranquil, and her tongue moist but furred. She had no abdominal tension or tenderness. There had been an evacuation from the bowels that morning after an enema. Twice or thrice during the day she had vomited green bilious matter, with no suspicion of stercoraceous vomit. The swelling in her left groin was about the size of a small hen's-egg, very tense, somewhat painful on pressure, and decidedly resonant on percussion. I had not the slightest doubt in my own mind that it was a hernial protrusion. Looking, however, to her previous history, and at the same time taking into consideration the absence of urgent symptoms, we determined to violate one of the golden rules of surgery, and to wait. We, therefore, decided on giving a quarter of a grain of extract of belladonna, every four hours; to apply ice to the swelling; and to feed her on small quantities of lime-water and milk, and Brand's essence of beef. She was also to have another simple enema. I heard no more of the case for the next forty-eight hours, when I was again requested to see her. The change in her condition, although not great, was very decidedly for the worse. She had had no motion from the bowels; the sickness of the same character was still present. Her countenance was somewhat more anxious, and the abdomen rather tense. No further delay was admissible; and, the patient consenting, the operation was performed under the influence of methylene. You will doubtless agree with me that no two operations for the relief of strangulated hernia are ever alike, and this one did not fail to have its peculiarity. We are taught in the books that, when fluid escapes upon puncturing one of the layers of tissue, you may feel confident that you have entered the sac of the hernia; and, as a rule, doubtless this is the case. But, on the present occasion, I divided three successive layers of tissue, from under each of which a large quantity of fluid escaped. The last one was the sac itself, and within it there was no difficulty in recognising the knuckle of intestine. The difference in colour is so striking that a mistake can hardly be made. The sac is of a pearly white colour, whereas the intestine varies from bright rose to coal-black, according as it has been strangulated a shorter or a longer time. For the rest, I may say that the patient made a perfect recovery, without a bad symptom—the wound healing by the first intention, and that without the intervention of Listerism.

You will naturally ask: Why, if you were convinced you had to deal with a constricted knuckle of intestine, did you wait? My answer is, that I had in my mind an acute recollection of a very instructive case, which happened to a colleague of mine, in the practice of the Royal Albert Hospital. A woman whom I myself sent into hospital, with what I thought to be a strangulated femoral hernia, fell to the lot of my colleague (Mr. Bulteel), who, agreeing with me, operated; and, having removed an enlarged gland, could find no sign of intestine. Upon

* Read before the South-Western Branch.

that the patient recovered, all the symptoms of strangulated hernia subsiding. Remembering this case, and seeing how slight were the constitutional symptoms, I felt justified in delaying the operation. At the same time, I must strongly enforce the rule for early operative interference in strangulated hernia. The plea for delay must, indeed, be a strong one to be admitted. The danger to the patient lies, not in the operation itself, but in the too frequent delay in performing it.

By one of those odd coincidences, which happen so frequently as almost to become a rule, I was asked by the same surgeon, within two days, to see another case of strangulated hernia: this time in an old gentleman, a retired member of our profession. The old saying, that "the cobbler's children are worst shod", was illustrated in his case. For years he had been subject to a left inguinal hernia, but had never worn a truss. His Nemesis overtook him on December 26th. I saw him on that day at noon. His hernia had been strangulated for twelve hours, and he had all the usual symptoms. It was very large and tense. We tried to reduce it by suspending him head downwards, but failed. He then consented to an operation, which I performed without the use of any anæsthetic, as his heart was exceedingly feeble. The operation was a particularly easy one, except that there was some little trouble in returning the bowel, owing to its large distension. He did well until about midnight, when, having previously loosened his bandages, he persuaded his attendant to allow him to get to the side of the bed. He then had an action of the bowels with violent forcing. The result was, that a large quantity of intestine was forced down into the scrotum, very soon causing enormous œdema of the penis and scrotum, and necessitating the removal of the stitches. Both Mr. Miles and Mr. Stamp tried in vain to return the bowel; and I saw him at 2 A.M. He was lying on his back, with a coil of intestine about six feet long protruding on his belly, forming a tumour nearly of the size of his head. We gave him ether, and I enlarged the opening; and, with infinite trouble, returned the bowel. I trust such an occurrence will never happen in your practice; but, should it do so, I think I can give you a practical hint which will assist you. Remember that you have to deal with a loop of intestine, passing through a small orifice. The first thing to be done is to fairly unravel the loop, and trace the two ends to the orifice. Make up your mind which end you intend to commence returning. Then, with your two forefingers, begin steadily to pass that end, with a sort of kneading motion, into the abdominal cavity; and never leave that end until you have passed the entire loop back in an orderly manner. Pricking the intestine is, I know, recommended; but I very much doubt if, in dealing with so large a mass, it would be of much service. I should prefer to use rather a small trocar, or else to aspirate. The enlarging the opening may be done freely and with impunity, provided you assure yourself, with the point of your forefinger, that no artery is in the way.

I regret to say that this case terminated fatally. He went on quite well until 8.30 the following night, when he suddenly became collapsed and died, doubtless from perforation.

In conclusion, I wish to direct your attention to one point in this operation. You know the ordinary method of operating is, after the first incision through the skin, to pinch up a bit of tissue with the forceps, nick it with the scalpel, cutting on the flat; then, passing a director through the opening thus made, to divide the layer of tissue on the director with the scalpel. I consider this to be both a clumsy and a dangerous proceeding. In the first place, unless your scalpel be very keen, the tissues, instead of being divided, recede before the knife, and it is very difficult to keep your deeper incisions as large as the superficial one. Again: the scalpel is very apt to slip off the director; and I have often felt no little concern, especially when standing by as a spectator, as to where its point might go. All this is avoided by the use of scissors. The scissors I use are those commonly employed for extirpation of the eyeball, blunt and slightly curved. With this instrument, the use of the director (in itself a danger) is dispensed with; and I am quite certain that the operation is performed with greater rapidity, neatness, and safety, than with the scalpel and director.

ATTENTION has been called to the condition of some of our city churches in a report just published by Mr. Wright, the honorary secretary of the City Church and Churchyard Protection Society. It appears that some of these last resting-places of the dead are mere depositories for rubbish, walled in by advertisement hoardings. Those which are singled out for special comment in the report are St. James's, Duke's Place; St. Martin Outwich; St. Mary Somerset; St. Mildred's, Bread Street; St. Anne's, Blackfriars; and St. Peter's, Westcheap. One is used as a lumber yard, by a churchwarden, as also is the church steeple; in another, an iron company deposits castings and bars; a third is seemingly appropriated by a dust contractor; whilst a fourth, we are told, is in a most wretched state of filth and desolation.

A CASE OF DISTOMA HEPATICUM (LIVER-FLUKE) IN MAN.*

By WM. EDWARD HUMBLE, MD., Corfe Castle; and
WM. VAWDREY LUSH, M.D., M.R.C.P.

At the present time, when flukes are so common in sheep, we think that some account of a case in which the same parasite was found in man may prove of especial interest. We propose, first, to give an abstract of the case; secondly, to give an account of the development of flukes, such as is commonly accepted; and, lastly, to suggest some difficulties which, in our opinion, militate against the acceptance of the same.

Richard Gover, of Corfe Castle, a labourer, aged 52, first came under the care of Dr. Humble about November 6th, 1879, complaining of vomiting, with pain at the upper part of the abdomen; and his general state was such as to lead to the supposition that he was suffering from gastric and hepatic cancer, although there were some difficulties in the way of the diagnosis. As his wife was suffering from very severe pneumonia and pleurisy, and his daughter from acute anasarca, he was recommended for admission into the Dorset County Hospital, and was received on November 21st.

On admission, his abdomen was somewhat distended with flatus, intensely tender at the upper part of epigastrium. His pulse was 72; respirations 20; temperature 98°. At that time, there was no vomiting, but he stated that he had been suffering from vomiting for two months, which had increased to such a degree that he had been unable to retain any food, either liquid or solid. Four days later, there were increased pain and tenderness at the epigastrium, right hypochondrium, and right ilium, and his pulse had risen to 102, his temperature to 101.3°. The next day, the right side of the abdomen looked a little larger than the left, but no increase of hepatic dulness could be detected. There was some diarrhoea. On November 28th, evacuations were passed involuntarily on coughing. The breath was very offensive. In this state he continued for some days, and, on digital examination, the upper part of the rectum appeared blocked up by some mass. On December 5th, there was much delirium. On December 6th, he vomited half a pint of coffee-ground fluid, with a dark greenish scum. The delirium continued more or less for several days, and subsided about the 11th. The next day, a large ash-coloured stinking slough, about five inches by three, was discharged *per rectum*. Though quiet and sensible, his motions were passed involuntarily; so he continued for some weeks, his appetite improving greatly, taking fowl, fish, rabbit, mutton, and even bread and cheese, for which he had an especial desire. At length, fistulous abscesses formed in the neighbourhood of the rectum; and, on March 9th, he was transferred to the care of the surgeon. He continued to sink, had rigors, and died three weeks afterwards, March 31st, 1880.

At the necropsy, the upper part of the rectum was found thickened and narrow, and fistulous abscesses opened into it. The liver was of a greyish red, tense, smooth, greasy, and easily broken down. The hepatic ducts were considerably thickened and enlarged, and contained about twenty-six fully developed distomata hepatica. The weight of the liver when cut open and drained of blood was 3 lbs.

REMARKS.—We can throw no light on the question, how the patient contracted the disease. His widow states that he rarely ate animal food, never sheep's liver, nor rabbit. He occasionally ate calves' lungs, but not the liver, and his diet was chiefly bread and cheese; he frequently ate watercress. Before applying to Dr. Humble, his symptoms appear to have been great and increasing fatigue on exertion, attacks of faintness and pallor, and loss of appetite. His widow says that, before any symptoms of illness, he became much stouter; and that she had to let his clothes out some inches. Does this correspond to the fattening of sheep mentioned by Simmonds?

We proceed to give some account of the development of the fluke. 1. The mature fluke contains and lays many thousands of minute eggs. 2. Under favourable circumstances, each egg gives vent to a ciliated spherical embryo. 3. These ciliated embryos swim or move about, and may attach themselves to the body of a snail, a slug, or some aquatic insect, and gain access to its interior. 4. Here these embryos lose their cilia, are transformed into a large cyst, and give rise to a brood of little tailed worms called cercariæ. 5. Now these cercariæ may be received into the bodies of quadrupeds either whilst in the bodies of their mollusc or insect hosts, or, having escaped from them, may be received by drinking water, etc. 6. Either in the bodies of

* Read at the meeting of the Dorset District.