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REPORT OF CASES OF STRANGULATED HERNIA, WITH OBSERVATIONS.

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With the concurrence of my friends, Messrs. Fowler, Eves, and Fricker, I am induced to publish the following cases and observations on strangulated hernia. Twelve of the fourteen cases occurred in the hospital practice of the two former gentlemen, and one each in the practice of Mr. Fricker and the late Mr. Whitmore. Although not a principal, through the kindness of the above named friends, I had the opportunity of witnessing

and in many cases assisting in the treatment. The constitution of the Cheltenham General Hospital and Dispensary is such as to preclude the surgeons of the Dispensary department from performing capital operations. The rules of the Institution demand that all such cases shall be admitted into the house under the care of the surgeon of the week. These appointments are ably filled by Messrs. Fowler and Eves, who are the Surgeons to the Hospital. There are three Surgeons to the Dispensary who have nothing to do with the Hospital, the appointments in the Hospital are filled up from those of the Dispensary according to seniority.

TABLE OF CASES.

No.	Name of Operator.	Age.	Sex.	Species of Hernia.	Duration of Strangulation.	Results.
1	Mr. Fowler	25	Male.	Inguinal	6 hours	Cured
2	Mr. Eves	25	ditto	ditto	10 hours	ditto
3	Ditto	19	ditto	ditto	8 hours	ditto
4	Mr. Fowler	25	ditto	Femoral	4 days	ditto
5	Ditto	63	Female	ditto	36 hours	ditto
6	Mr. Eves	46	Male.	ditto	24 hours	Died of hæmorrhage
7	Mr. Fowler	50	Female	ditto	4 days	Died
8	Mr. Eves	22	Male	Inguinal	6 hours	Cured
9	Mr. Fowler	45	ditto	Large scrotal	ditto	Died
10	Ditto	65	Female	Femoral	2 days	Cured
11	Ditto	33	Male	Inguinal (scrotal)	24 hours	ditto
12	Mr. Fricker, (private)	57	ditto	ditto ditto	4 days	ditto
13	Mr. Fowler	85	Female	Femoral	2 days	ditto
14	Mr. Whitmore	26	Male	Inguinal	3 days	ditto

CASE I.

INGUINAL HERNIA, STRANGULATED; OPERATION;
PERITONITIS: RECOVERY.

George Bleck, aged 25, a baker's servant, admitted into the Cheltenham Hospital, January 16th, 1839, with a strangulated scrotal hernia on the right side. He gave us the following history of his case:—Has had a hernia for more than three years, which has always been reducible, and he has worn a truss. Six months since he broke it, and he neglected to replace it. The rupture has often descended into the scrotum, but never to the extent it has done this day. About ten o'clock this morning, while he was lifting a heavy weight, the hernial protusion descended with great pain, and he could not return it. A druggist in the town saw him, and ordered him to go to the hospital. I saw him soon after his admission, at half-past twelve, a.m.; he was in excruciating agony, and was with difficulty retained in bed; he had a large tumour in the right groin, extending into the scrotum, very tense and painful, especially at the situation of the external abdominal ring, pain in the abdomen, constant vomiting, and constipation of the bowels. So tense was the tumour, that I was persuaded in my own mind that all efforts at reduction by the taxis would prove ineffectual. The warm bath was used, and the taxis employed by myself and Mr. Fowler to no purpose.

3 p.m. The operation was performed by Mr. Fowler. The sac being reached, it was carefully opened, but there was no fluid; a large quantity of small intestine with the mesentery was exposed; several glands in the latter were enlarged, and one was the size of a pigeon's egg; the intestine was exceedingly dark. The stricture was divided by Mr. B. Cooper's sheathed knife, and the contents of the sac were returned with considerable difficulty; the wound being united by sutures and plaster, he was sent to bed, apparently little relieved by the operation, and the following mixture ordered:—

Magnes. Sulph., dr. ss., ex Aq. Ment. Pip. oz. iss., quartis horis.

9, p.m. Is in great pain, lying on his back with his legs drawn up; countenance pale and anxious; pulse 90, small and hard; vomiting continues; thirsty; very restless; has passed a considerable quantity of fluid blood, unmixed with feces, per anum; the bowels have not been opened since the 15th. We gave him a small quantity of gruel, with a few drops of brandy in it; he had also an enema of warm water, which returned without bringing away anything but blood. Ol. Ricini, oz. j., which made him sick.

Jan. 17th. Has had a tolerable night, but no stool; has passed more blood; pulse quick and full; tongue white; abdomen very painful; tendency to sickness. Hirudines 50 abdomini; haust aperiens.

4, p.m. Somewhat relieved. To have an enema of castor oil and turpentine, which produced no effect. Calomel, gr. iii; Opii, gr. ʒ; tertiis horis.

10, p.m. Says he is easier, and disposed to sleep; pulse 100.

18th. Has had a quiet night; slept at intervals;

has hiccough; bowels slightly moved; abdomen painful and tympanitic.

19th. Much better; a purgative draught produced several copious stools. A remission of all the symptoms followed.

20th. Has had a disturbed night, owing to the supervention of a diarrhoea, probably occasioned by the calomel and opium; has taken fifteen pills. Mist. Cretæ Comp. cum Liq. Opii Sedativo.

21st. Going on favourably; from this time he made a good recovery, the wound healed kindly, and he was discharged.

CASE II.

INGUINAL HERNIA; STRANGULATION; OPERATION;
RECOVERY.

Thomas Stoyale, aged 25, was admitted, Sept. 6th, 1839, under the care of Mr. Eves, with a strangulated hernia of the right side, which descended into the scrotum. He presented himself at the out-patients' room, and asked for a dose of medicine; the person who saw him very prudently examined him, thinking there was more anxiety of countenance than usual. A hernia was detected. He gave a most confused history of his case; he had never worn a truss. The symptoms present were,—tumour in the right groin, the size of a duck's egg, tense and painful; pain in the epigastric region; nausea; countenance pale and anxious; says he had a stool yesterday; pulse 100, very full; says the hernia only came down this morning. He was placed in the bath, and the taxis used, without effect. He was subsequently bled to 25 ounces from the arm, which induced syncope. Three hours after his admission Mr. Eves was sent for, who proposed an operation, which was not consented to. Ice was applied.

At 11 o'clock, p.m., eleven hours after his admission, as the symptoms were most distressing, vomiting almost constant, pain over the abdomen increased, pulse 120, he requested to have the operation performed, which was rendered very difficult by the cowardice of the patient. The sac was opened and contained no fluid, its contents were omentum and small intestine; the stricture which was situated high up the canal was very tight; the contents of the sac were returned with difficulty, owing to the resistance of the patient; the wound was united by sutures and plaster, with a compress and bandage. He expressed himself greatly relieved by the operation.

September 7th. Had a good night, and complains of little pain. As the bowels were not opened, he was ordered to take Ol. Ricini, oz. ss., quartis horis.

8th. He took two doses of castor oil without producing any effect.

Magnes. Sulph., dr. j., ex Aq. Ment. Sativ., oz., j., quartis horis.

9th. Bowels well acted on.

From this time he went on favourably, and was discharged October 1st.

CASE III.

INGUINAL HERNIA, STRANGULATION; OPERATION;
RECOVERY.

Henry Parker, aged 19, a mason, admitted February 22nd, 1840, under the care of Mr. Eves, at 9 o'clock,

p.m., with a strangulated scrotal hernia on the left side. He says he has had a rupture as long as he can remember, but has never worn a truss; it often descended into the scrotum, but he always has been able to return it in the recumbent position. After his day's work the rupture descended, and was harder than usual, and being unable to return it, he applied for admission into the hospital.

We found a tumour, the size of a large lemon, tense and painful; the testicle could not be felt; there was an evident constriction at the external ring; sickness; countenance very anxious; pulse full and hard; bowels opened this morning.

He was placed in the bath, and bled to sixteen ounces from the arm. The taxis produced no effect on it. Mr. Eves proposed the operation, which was consented to, and performed eight hours after the strangulation. The parts were very vascular, and the sac unusually thick; the sac contained a small quantity of fluid, small intestine, and a portion of mesentery; the stricture was at the inner ring, and was divided on the finger; considerable difficulty was experienced in reducing the intestine, owing to the quantity protruded. It was greatly congested. The wound was united as in former cases.

Feb. 23rd. Had a good night, and is free from pain; tongue white; pulse 94; bowels not opened. Mist. Magnes. Sulph.

24th. Had a good night, and is free from pain; pulse 90; tongue white; no evacuation from the bowels. To have an enema, which produced the desired effect.

25th. From this time he progressed favourably; the wound was a long time healing by granulation. A few weeks after this man was re-admitted, and the cicatrix had a sloughy unhealthy aspect, which would not heal. He was sent into the country, and did not again present himself. The hernia was radically cured.

CASE IV.

FEMORAL HERNIA, STRANGULATION; OPERATION: RECOVERY.

Henry Trapp, aged 25, a coalheaver, admitted April 8th, 1840, under Mr. Fowler's care, with a tumour immediately below Poupart's ligament on the right side. He had been visited by two surgeons previously to his admission, who recommended him to go to the hospital, which he at first objected to, but afterwards consented.

2, p.m. I saw him, and found a tumour about the size of a partridge's egg in the right groin, circumscribed, moveable, and rather tender. The history was unusually obscure, he says he has had a swelling "off and on" for two years, which enlarged when he caught cold, but never disappeared altogether. Four days since it became larger, and he had great pain in his bowels, and sickness, which subsided after taking medicine. The bowels were opened on the 4th; vomiting has increased the last thirty-six hours. In about an hour after his admission he was visited by Mr. Fowler, who expressed some doubt in common with others as to the nature of the case. His countenance was free from anxiety; tenderness of the abdomen very slight; the impulse given on coughing was very trifling. It was agreed to

watch the case, and he was ordered Ol. Ricini, oz. iss., cum Tinct. Opii, m. xv.

8, p.m. Mr. Fowler was sent for. The symptoms of strangulated hernia were well marked; pain in the abdomen severe; vomiting of green fluid; and hiccough. Under these circumstances it was deemed advisable to cut down on the tumour; an incision was made parallel with Poupart's ligament, and the dissection cautiously proceeded with, when the true nature of the case was discovered, (femoral hernia.) A small quantity of fluid escaped when the sac was opened; its contents were dark-coloured intestine. The stricture was divided on a director, and the intestine easily returned. The operation did not last more than five minutes.

9th. Had a tolerable night; bowels opened twice spontaneously; doing well.

10th to 24th. His recovery progressed without any interruption; he is only detained in the hospital till the cicatrix is sufficiently sound to bear the pressure of a truss.

CASE V.

FEMORAL HERNIA; STRANGULATION; OPERATION: RECOVERY.

Ann Toby, aged 63, admitted April 24th, 1841, with a femoral hernia in a strangulated state on the right side. She is a healthy woman, and has had a large family. About sixteen years since, she perceived a tumour in her groin the size of a pigeon's egg, but took no notice of it, as it always diminished when she was in bed. Yesterday morning when using exertion, it descended, and became larger than usual; this was followed by griping pain and sickness; she took castor oil and salts, but vomited both. She applied to a medical man, who sent her immediately to the hospital.

On her admission, we found her in the following condition:—Pulse tranquil; countenance free from anxiety; bowels soft; little pain on pressure. The tumour was of a large size in the usual situation of a femoral hernia, soft; bowels confined; no sickness since the morning. Attempts were made to reduce the rupture in vain. As there seemed to be no urgent reason for operating immediately, a dose of calomel and opium and an aperient draught were ordered.

April 25th. She has passed a bad night, and has had feculent vomiting; after some persuasion, she consented to have the operation performed. The contents of the sac were intestine and omentum; the former was returned and the latter allowed to remain, as it was adherent. The operation was quickly performed, and the patient expressed herself much relieved; in six hours after it, she commenced taking the Magnes. Sulph. ex Aq. Mentb. Piperitæ.

April 26. Had a good night, took two doses of the mixture, which operated freely.

June 7. She was discharged cured, with a truss.

CASE VI.

FEMORAL HERNIA; STRANGULATION; OPERATION: DEATH.

Thomas Maisey, aged 46, a labourer, of spare habit, admitted May 3rd, 1840, under the care of Mr. Eves, with a femoral hernia on the right side. He says he has had a rupture six months, but has never worn a

truss; it descended, and became larger than ever the day previous to his admission; he had pain in the bowels, and was sick. The bowels were opened a few hours before the strangulation of the rupture. He was visited by a surgeon in the country this morning, who bled him largely, and endeavoured to reduce the hernia, but in vain. He sent him into the hospital at 10 p.m.

The usual symptoms of strangulated femoral hernia were present, but were not urgent, which perhaps in some degree may be accounted for by the combined effects of the treatment and the fatigue of the journey. The warm bath was used, and the taxis employed, without success.

Half past 11, p.m. It was decided that the operation should be performed. It proved to be a difficult one. On prosecuting the dissection a quantity of altered glandular structure was found between the fascia propria and the sac, resembling omentum. On clearing this away, and carefully dissecting, the sac was opened, and a small quantity of dark fluid escaped; the swelling sensibly diminished. A small portion of dark intestine was seen just protruding through the femoral ring; the stricture on it was so tight that neither the finger-nail nor director could be pushed beneath it, and the intestine was so extremely resistant from distention by air and fluid, that great caution was required to prevent its rupture. The hernia-knife was gently pushed onwards, its blunt point entered beneath, the stricture was divided, and the knuckle of intestine spontaneously retired. Previously to the performance of the operation he told us "*when he was cut he always bled freely.*" In three hours after the operation considerable hæmorrhage took place from the wound; the house-surgeon applied a compress and bandage to arrest it.

May 4th. I visited the patient with Mr. Eves this morning; a large quantity of blood had been lost; the bed was saturated, and it had run through it on to the floor beneath; the compress and bandage were removed; the wound filled with thin pale blood; no vessel could be discovered. We effectually arrested the hæmorrhage by including a considerable quantity of cellular substance in a ligature; the pulse was 70, and steady; has had no sickness nor pain since the operation.

In the evening the belly became tender; countenance flushed; tongue white. The following day intense peritonitis set in, accompanied by great exhaustion; calomel and opium were used with small quantities of brandy, and he died May 6th.

I was not present at the *post-mortem* examination. Mr. Eves informed me, that although there were appearances of peritonitis all over the cavity of the abdomen, it was not so severe as might have been expected. The bowels generally were dark-coloured and congested, but the portion strangulated was thickened, and the calibre diminished. The circulation was not re-established in it.

CASE VII.

FEMORAL HERNIA; STRANGULATION; OPERATION:
DEATH.

Mary Turner, aged 50, married, the mother of several children, was admitted a patient of the Dispensary

January 2nd, 1841. I visited her immediately, and found her labouring under symptoms of strangulated hernia; the tumour was situated in the left groin. It appeared she first felt pain in her bowels, and vomiting, Dec. 31st, and sent for a person in the neighbourhood, who administered injections. When I saw her at half-past two, p.m., I ordered her into the hospital, as the symptoms were very urgent. The countenance was anxious, and of a leaden hue; vomiting feculent; pulse small and thready; the tumour was small, about the size of a pigeon's egg. I immediately after visiting her, called on Mr. Fowler, and requested his immediate attendance.

5, p.m., Mr. Fowler operated. The sac being opened, a portion of intestine of a very dark colour was seen; the stricture was divided, and by a little gentle manipulation the bowel was readily returned. A large quantity of greenish fluid escaped from the abdomen; the operation afforded no relief; the acute suffering remained unabated until death terminated her existence, twenty-four hours after the operation. The treatment consisted in the use of calomel, and opium, and leeching.

Post-mortem examination. The body was emaciated, and the abdomen swelled; on opening it the cavity presented marks of intense peritoneal inflammation, and contained about two pints of fluid, of a greenish brown colour; the peritoneum was highly injected; the intestines generally inflamed, and congested; the portion which was strangulated was situated at the junction of the great and small intestines, and the impression made by the stricture was visible; the coats of the bowels were softened, and easily separated.

CASE VIII.

INGUINAL HERNIA; STRANGULATION; OPERATION:
RECOVERY.

Isaac Neale, aged 22, a smith, admitted into the Cheltenham Hospital, under the care of Mr. Eves, August 15, 1842, with an inguinal hernia of the right side. He states that he has had a rupture as long as he can remember, but has never worn a truss. At seven o'clock, p.m., it came down, during the time he was at work, and was very hard and painful. When admitted he had acute symptoms; vomiting; anxiety and paleness of countenance; pain over the abdomen. The tumour was irregular in shape, tense and painful, and descended into the scrotum. He was bled to sixteen ounces, and put in the warm bath, and the taxis gently used, at one, p.m., both by Mr. Eves and Mr. Fowler, but without effect. Previously to the performance of the operation, by Mr. Eves, Mr. Fowler enquired of the patient if both testicles were in the scrotum, which question was not satisfactorily answered. Nothing particular occurred in the progress of the operation till the sac was reached, which was very thin, and contained no fluid; its contents were omentum and gut, the former lying anteriorly to the latter; the stricture, which was high up, being divided, after a little manipulation, the protruded parts were returned. The testicle was exposed, and had escaped through the ring, but had not descended farther than just through its mouth; it was rather smaller than

usual. The wound was dressed in the usual way, and the man expressed himself greatly relieved by the operation. His bowels had not been moved since the 14th. *Liq. Opii. Sed., m. xv.*

Aug. 16th. Doing well; pulse 80. *Mist. Magnes. Sulph., quartis horis.*

17th. No stool; pulse 94, and sharp; complains of pain in the wound and over the region of the heart, which is increased by inspiration; there has been a great discharge of serum from the abdomen.

18th. Bowels freely opened yesterday evening and again this morning; wound nearly healed. I made particular inquiry respecting the descent of the testicle; he told me "it never had been down like the other."

23rd. From this time he rapidly recovered, and was discharged cured.

CASE IX.

LARGE SCROTAL HERNIA; STRANGULATION;
OPERATION: DEATH.

John Hughes, aged 45, a milk carrier, was admitted January 9th, 1845, under Mr. Fowler's care. He has been accustomed to lift heavy weights; about a year since he observed a swelling in the right groin, which descended into his scrotum; it was about the size of an egg, and returned into the belly when he was lying down. He has never worn a truss. This evening, about seven o'clock, it suddenly descended, and was far larger than ever it has been before; he was immediately seized with violent dragging pain about the navel, sickness, &c. He applied to a medical man, who gave him something to make him vomit. On his admission we found a tumour about one foot in length, and, I should think, measuring at least twenty inches in circumference, exceedingly tense and painful, especially at the external ring; the greatest pain was about the navel; his countenance was particularly anxious; pulse small and feeble; the surface of the body was cold. The house-surgeon, Mr. Hartley, agreed with me that any attempt at reduction by the taxis in this case would be replete with danger. He sent to Mr. Fowler immediately, who on his arrival, at one p.m., said, "Surely this cannot be all intestine and omentum," but on carefully examining it, was unable to detect any transparency. Mr. Fowler made gentle attempts to reduce the hernia, but was convinced with us that any great pressure from without would expose the man to imminent danger of bursting the bowel. The operation was immediately performed. Having exposed the sac, Mr. Fowler endeavoured to divide the stricture without opening it, but failed. On opening it, the contents were found to be a large quantity of small intestine and mesentery, but no fluid. The stricture, which was scarcely in reach of the finger, was divided, but the greatest difficulty was experienced in reducing the bowel, which in quantity would fill a hat; it was enormously distended by air; at length this difficulty was surmounted, and the wound united by four sutures. He expressed himself much relieved. *Calomel, gr. iij; Opii., gr. iss.*

Jan. 10th. Looks well; pulse 84; has been sick once.

11th. No evacuation from the bowels; looks depressed, resembling the appearance of a man who has had a severe accident; tongue loaded; pulse small, 90. Took a dose of castor oil, which made him vomit a large quantity of greenish fluid; an enema brought away a large quantity of fæces.

8, p.m. Belly sore; pulse 120; eyes depressed; there is a great tendency to a re-protrusion of the parts; he has all the symptoms of acute peritonitis coming on. He was largely bled from the arm; turpentine fomentations were used; calomel and opium freely exhibited.

12th. All the symptoms became aggravated, and he died this afternoon.

Post-mortem examination twenty-four hours after death. The abdomen only was examined. The small intestines were glued together by recently-effused lymph; that portion which was protruded had not recovered from the pressure of the stricture; the mesentery was congested, and several ecchymoses were observed on it; there was much air, but little fluid, in the peritoneal sac and intestines.

CASE X.

FEMORAL HERNIA; STRANGULATION; OPERATION:
RECOVERY.

Ann Toby, aged 65, admitted October 18th, 1845, under Mr. Fowler's care, with a femoral hernia of the left side, in a state of strangulation. She has had a double femoral hernia for many years, and was operated on by Mr. Fowler, April, 1845. (*Vide Case V.*) She has worn a single truss since that period.

On the 16th while coughing violently the tumour on the left side descended, and was painful, the pain extending all over the abdomen. On her admission we found a tumour on the left side, of an irregular shape, evidently a femoral hernia. Countenance was anxious; pulse 88; sickness and obstinate constipation. No effect was produced by the use of the taxis.

Mr. Fowler operated about two hours after her admission. The sac contained no fluid nor intestine, only omentum, which was very red. Gimbernat's ligament was freely divided, and a portion of omentum returned, the greater part being allowed to remain in the sac. *Liq. Opii, m. xxv.*

October 19th. Going on well; bowels opened without any medicine.

November 16th. She has recovered without a bad symptom, and had a double truss applied.*

CASE XI.

INGUINAL HERNIA, SYMPTOMS DUBIOUS; OPERATION;
CONSTIPATION RELIEVED BY THE USE OF PURE
MERCURY: RECOVERY.

Henry Strain, aged 33, a labourer, an in-patient of the hospital for amaurosis and cataract, complained to the house-surgeon, November 14th, 1845, of pain in the bowels, and a swelling in the left groin. He said he

* This poor woman died suddenly of disease of the heart in December, 1845. I examined the body. I found the hernial sac on the right side contained omentum, which plugged the femoral ring. The sac on the left side was indistinct, and contained nothing. The coverings of both were much thinner than I expected to find them.

had a rupture for the last ten years, and had worn a truss, which never kept it up properly. In the afternoon the hernia descended, and he was unable to replace it. He did not complain of it till the morning of the 14th. The tumour was situated in the left side, was of the size of a lemon, and descended partially into the scrotum; it was tense, especially and about the external abdominal ring. He referred the pain to the "wind descending into the flank, and making a sudden twist;" there is a great distension of the abdomen, but no sickness; flatulence very considerable; his countenance does not betray the anxiety peculiar to cases of strangulated hernia; pulse quiet; bowels not opened for twenty-four hours. Cold applications and other remedies, calculated to disperse the flatulence, were used to no purpose.

In the afternoon, Mr. Fowler proposed an operation, as the belly was hourly becoming more painful. Although the symptoms present were more like colic than strangulated hernia, it was deemed proper to liberate the stricture. The sac contained colon and omentum; the stricture was easily divided, and the finger passed into the abdomen, but we were unable to return the intestine. The integuments were brought together over it. *Liq. Opii Sed.*, m. xxx.

In the evening his symptoms were unrelieved, he complained of violent pain in the abdomen, which was sore. Pulse 90, small; countenance much distressed. *Ol. Ricini*, oz. j., *ex Aq. Ment. Piperitæ*.

Nov. 15th. Has passed a dreadful night; has been very sick; pain severe in the belly, which is enormously swollen. Had a turpentine enema, and full doses of calomel and opium were given. In the evening he was still worse. Pulse small, and sickness continued; hiccough constant.

16th. Another bad night. Pulse small and rapid; constant sickness; scrotum enormously swollen, and very red. Another enema was administered, which brought away fæces and wind. Cajeput-oil, and calomel, and opium, have been given freely.

17th. Symptoms aggravated; vomits stercoraceous matter; the enemata have produced no effect; he appeared to be in a hopeless state; hiccough constant.

18th. Much the same. Mr. Fowler ordered the calomel and opium to be omitted. Twelve leeches to the scrotum, which threatens to slough. In the evening he became much worse, the sickness and tympanitis increased up to the present hour; the bowels have not been opened satisfactorily. Two drachms of pure mercury were given him; as soon as he swallowed it, Mr. Hartley informed me he looked ghastly, and complained of a curious sensation in the seat of the hernia. A few hours after the exhibition of the mercury, he passed a copious stool in the bed, but the nurse told me there was no appearance of quicksilver in it. The inflammation of the scrotum has diminished; the sickness is checked.

20th. Sickness returned once to day; complains of great prostration; tympanitis rather increased; is unable to sleep.

23rd. Has continued much in the same state since the last note; he was sick to day after taking castor

oil; tongue brown and dry; the wound is sloughy; face flushed. Poultice the wound.

27th. Since the last note he has improved; the tympanitic state of the abdomen has diminished, which has become softer; healthy granulations have sprung up. The treatment pursued has been to soothe the parts, a light nutritious diet, laxatives, and sedatives.

December 1st. Has had a slight attack of erysipelas from excess of diet, suppuration is extending up the inguinal canal. On percussing the abdomen a dull rumbling noise is heard; the wound is gaping, and the coats of the intestine are visible; has still slight erythma of the face, which may perhaps be attributed to the mercury taken for the amaurosis, and since the operation.

17th. A small abscess in the scrotum was opened to-day; the hernial protrusion retires into the abdomen when he lies down, which may be consequent on the absorption of the omentum.

29th. Suppuration spreading upwards; Mr. Fowler slit up the integuments for four inches, and a large quantity of matter escaped.

Jan. 29th, 1846. From the time of the last note every thing went on well with him. The wound is now well and he was discharged cured, but the hernia could not be kept up by a truss.

CASE XII.

LARGE INGUINAL HERNIA; STRANGULATION; OPERATION: RECOVERY.

W. H., aged 57, the subject of an irreducible scrotal hernia for some years past, sent to my friend Mr. Fricker, Dec. 12th, 1845. He complained of sickness pain in the abdomen, and obstinate constipation.

December 15th. Mr. Fricker kindly requested me to visit him. I found a corpulent man, leading a sedentary, abstemious, and regular life; his countenance was free from anxiety; great pain all over the abdomen; a large irregular tumour in the left groin, extending into the scrotum; he vomited stercoraceous matter, and had constant hiccough; pulse 110; has had no stool since Dec. 12th. Everything calculated to relieve him had been done by Mr. Fricker. An operation was proposed and declined. *Opii*, gr. iij., *statim*.

16th. The operation for strangulated hernia was performed by Mr. Fricker; the sac was opened and contained a large quantity of omentum and colon, the stricture being divided. A small portion of the omentum was removed, but as there was some bleeding we judged it prudent not to remove more; the colon was adherent to the sac inferiorly. The edges of the wound were approximated over the tumour, and two grains of opium were given.

17th. Appears depressed; no vomiting; pulse 120; pain in the lower part of the abdomen, but bears pressure well; countenance good; unable to take anything excepting a little cold water. As soon as any fluid enters the stomach it produces vomiting and hiccough. He took two grains of opium. *Infus. Rosæ cum Magnes. Sulph.* As soon as he took the first dose of medicine it produced violent vomiting of fæulent matter. *Creosote*, m. iij., which did not check the vomiting. In the evening we visited him, and

found the vomiting had not stopped. A small quantity of sherry and water remained on the stomach. Pulse 110; tongue clean; the least movement to the left side produces vomiting. We deemed it prudent not to vex the stomach with medicine, and left him for the night.

18th. Has passed a bad night; constant vomiting of faecal matter; pulse 110; countenance remains good; tenderness of the abdomen increased. In the evening he said he felt "a movement of wind downwards." With Mr. Fricker's concurrence, I now ordered an enema of turpentine and oil, which produced a copious evacuation; his pulse fell to 90, and he felt exhausted and inclined for sleep. Calomel gr. v., cum Opil, gr. ij. In the evening we found him somewhat better, still he is harassed by hiccough; free from sickness. Mist. Effervescens cum Ammonia et Tinct. Opil.

12th. Unable to sleep on account of hiccough; pulse 84; tenderness of the abdomen considerable. Infus. Rosæ cum Magnes. Sulph., which operated freely. We prescribed some lemon ice in the day, which relieved the distressing hiccough.

20th. Has had several copious stools; is cheerful and doing well. The wound is healing by granulation.

From this time till the end of January, 1846, he went on favourably and is wearing a bag truss. The hernia is quite as large as it was before the operation; he complains of a dragging pain in the abdomen, and occasional irritation of the stomach and bowels.

CASE XIII.

FEMORAL HERNIA; STRANGULATION; OPERATION: RECOVERY.

Jane Barnett, aged 85, admitted March 17th, 1847, under the care of Mr. Fowler, with a femoral hernia of the right side. Symptoms of strangulation have existed since the 15th; vomiting; constipation; slight tenderness of the abdomen; pulse 80. She is of a spare habit; there is a tumour in the right groin, about the size of a walnut; she has never worn a truss, and is the subject of a procidentia uteri, and very deaf.

8, p.m. Mr. Fowler operated; the whole proceeding did not occupy more than five minutes. The fascia propria and sac formed an agglutinated mass, much thickened, and there was a small quantity of fluid in it. The sac contained a knuckle of dark-coloured intestine; the stricture was divided on a grooved director, and the protruded part reduced. Calomel, gr. iij., Opil., gr. iss., were given.

March 18th. Has had no vomiting since the operation; no action of the bowels; urine drawn off by catheter; pulse 84. Ol. Ricini, oz. j.

19th. Has had several stools; countenance a little flushed; pulse 90. Ordered nourishing diet. Mist. Cretæ. Comp. cum Liq. Opil. Sed.

20th. The purging stopped. Meat diet.

26th. Quite well.

CASE XIV.

CONGENITAL INGUINAL HERNIA; DESCENT OF THE TESTIS, INCOMPLETE; OPERATION: RECOVERY.

Mr. J., aged 26, sent for Mr. Whitmore, November 1st, 1832, late in the evening, complaining of pain in

the bowels. A tumour, about the size of an egg, situated in the left groin, was discovered, tense and very painful on pressure. He had been sick, and felt slight pain in the bowels; no stool since October 29th.

After giving some general directions, Mr. Whitmore left him for the night, being in attendance on a dangerous labour. On visiting him the next morning, Mr. Whitmore found him vomiting, with an anxious countenance, and the usual symptoms of strangulated hernia. The warm bath, bleeding from the arm, and a moderate use of the taxis were tried, but the reduction of the hernia was not effected. Neither testis had descended into the scrotum. He gave the following history of the case:—

He has had a rupture as long as he can remember; and about fifteen months since he had a similar attack to the present one, while residing in the country. He sent for a surgeon, who failed in affording him any relief. Having dismissed this practitioner, he applied to a noted quack-doctor. The case being one of obstinate constipation, he administered a drastic purgative powder, which he called "golden dust;" and after each dose he made the patient walk about the room. The rupture was reduced.

At 12, p.m., Mr. Fowler saw the patient, with Mr. Whitmore; an operation was proposed and performed by Mr. Whitmore. The sac was opened, and a quantity of fluid escaped; the contents were omentum and bowel; the stricture being divided, they were returned. The testis was found lying in the sac, and at the mouth of the external ring; it was small, but otherwise healthy. The patient recovered without a bad symptom.

(To be continued.)

THE LAW OF THE MORPHOLOGY OR METAMORPHOSIS OF THE TEXTURES OF THE HUMAN BODY.

(Fourth Series of Experimental Researches.)

By WILLIAM ADDISON, M.D., F.R.S., Malvern.

(Continued from page 231.)

XIII. REGULAR, IRREGULAR, RETROGRADE, AND ASCENDING METAMORPHOSES IN ANIMAL TEXTURES.

"If we examine the broken ends of a fractured bone from the first to the tenth day after the injury, we shall find the periosteum and medullary membrane torn, the neighbouring soft parts swollen, and an effusion of blood around and between the fragments. The periosteum is more vascular, it has lost its fibrous character, and a reddish fluid is effused into its substance. The medullary membrane undergoes similar changes,—the marrow assumes a kind of fleshy appearance, and a viscid gelatinous matter makes its appearance in the situation of the fracture.

"From the tenth to the twenty-fifth day the soft parts in the immediate situation of the fracture become more solid, and adhere more intimately to the matter between the fragments, which has now assumed the fibrous form, and the membrane filling the medullary