BRITISH MEDICAL JOURNAL:

BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED BY ANDREW WYNTER, M.D.

No. XLIV.]

LONDON: SATURDAY, OCTOBER 31, 1857.

[NEW SERIES.]

Illustrations

OF

HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

BRISTOL ROYAL INFIRMARY.

CASES OF STRANGULATED HERNIA REQUIRING OPERATION.

By AUGUSTIN PRICHARD, Esq., Surgeon to the Infirmary.

It is a frequent saying of the older hospital surgeons much accustomed to operations, that no hernia case is like its predecessor, and that something new turns up at each successive operation; and that these remarks are true, the following cases will tend to prove. They are all upon which it has been my lot to operate during the last twelve months; and all but one were in the wards of the Bristol Royal Infirmary. They are of interest, not only on account of their varied nature, but because some of the accidental symptoms which occurred in their progress were of the rarer kind.

CASE I. *Large Irreducible Femoral Hernia, with Symptoms of Strangulation: Ulceration of the Sac, and Operation: Recovery.* M. W., aged between 45 and 50, was admitted under my care on the 21st of August of last year. She had been the subject of rupture for twenty years; and eight years ago was operated upon for strangulated hernia by a surgeon in the neighbourhood of Bristol. The swelling has since that time been large and irreducible.

On Monday, August 18th, she was coughing, and the tumour increased in size, and a hole appeared on the outer part, from which fluid oozed; and in the course of a day or two, a large quantity flowed out. This was evidently from the sac which had given way.

Upon admission, there was a large irregularly lobulated oval tumour extending completely across the upper part of the right thigh, down to the edge of the labium, and considerably overlapping Poupart's ligament. It was very tender, but not very tense; while the abdomen was both tense and painful. She had frequently vomited, and her bowels had been confined since Monday. She stated that she had passed flatus *per anum* once since that time. Her pulse was low and weak.

I operated, under chloroform, about 9 P.M. (two and a half hours after her admission), and laid open about three-fourths of an inch of the tumour from the opening where the sac and integuments had given way, and introduced my finger. The sac was fully distended with small intestine, apparently healthy. The opening into the abdominal cavity was free; and as the patient was very weak and sinking, and it did not appear safe to lay open the sac thoroughly, I brought the wound together, and sent her to bed.

In the night she was much worse; collapsed, and weak, and vomiting; and the next day (22nd), as the symptoms were very urgent, I determined to examine further, to find out if there was any strangulation below. I therefore made two incisions into the sac, one above and the other below, and introduced my finger freely to the lower part, and found the intestines much glued together by recent peritonitis. After separating them considerably, I sent her back again to bed, without much hope of her recovery. I ordered her a pill, containing half a grain of opium, one grain of calomel, and two of blue pill, every two hours.

In the evening I found her rather better, having passed flatus *per anum*, by which she was relieved. She had also slept.

August 23rd. She passed a good night. The tumour was

very tense, measuring *fifteen inches* in its largest diameter (*i.e.*, horizontally), and *eight inches and a half* across (*i.e.*, vertically). The integuments were inflamed. I ordered her to have an injection of warm water, and to take a pill every four hours.

August 24th. The vomiting returned. The tumour became very tense and red, with tympanitis. In the evening the bowels were moved three or four times, relieving the pain and tension. An opiate draught was ordered to be taken twice a day.

Diarrhoea set in next day, and was checked chiefly by opiates. She had a little wine, but had no appetite for food. The sac suppurated and began to discharge freely on August 28th; and on the 1st of September she began to take food. From this time she gradually mended, and was discharged cured, with a bag truss contrived by two of my pupils under my direction. It was made of a mould of gutta percha fitting to the tumour (which, of course, remained irreducible), and lined with lint, kept in its place by means of elastic webbing from the four corners, the two lower passing round the upper part of the thigh, and the two upper round the pelvis. By this contrivance, constant tolerably firm and equable pressure was made on the tumour, and it was protected by the gutta percha from external injury.

REMARKS. The large size of the tumour in this case added greatly to the danger; for if I had, according to the old fashioned method, laid open the entire sac, it would undoubtedly have proved fatal; and although I divided no stricture, I believe that, by separating the adhesions by the finger in the second operation, the obstruction to the canal was removed, and the patient placed in a better position with a view to recovery. The calomel and opium pill was of decided service.

CASE II. *Inguinal Hernia: Operation on the Third Day of Strangulation: Death with Symptoms of Pyæmia.* A. B., a rustic labourer, aged 65 years, was admitted under my care on Saturday, December 6th, about 3 P.M. He had been a free liver, and had been for some years the subject of rupture. The swelling had been down since Thursday, December 4th, and was larger than it ever was before. It was very tense and hard, and he had vomiting, with great abdominal tenderness. The hernia was in the left groin, but he was also the subject of a ventral hernia in the upper part of the abdomen, and of inguinal hernia of the right side, as well as of stricture of the urethra.*

In performing the operation under chloroform, after making a fair trial of the taxis, I came down upon something like a sac, containing a vermiform appendage, which proved to be a cyst upon the true hernial sac. The latter contained but little fluid, and about five inches of intestine, not very dark in hue. The stricture was very tight. After dividing the outer ring upwards, I experienced much difficulty in returning the intestine, and was obliged to make a further division of the stricture before I could get it all back. During the manipulations, a small rent was made in the peritoneal covering of the intestine.

In the evening after the operation, he appeared much in the same state, without any signs of rallying; the pulse was intermittent and weak, and he had vomited. The treatment consisted of opiates and stimulants. In this way he went on for three days, without any perceptible rallying of his powers; the scrotum became very dark, and infiltrated with blood, and he died on the 9th; *i.e.*, on the fourth day after his admission. His symptoms before death were those usually seen in pyæmia, with uninterrupted failing of all his powers.

At the *post mortem* examination (at which I was not able to be present), nothing very distinctive was discovered. There was imperfect suppuration about the spermatic cord and scrotum, but no extravasation of blood was found in the abdomen

* Many years ago, during my apprenticeship, I assisted my friend Mr. Morgan in a *post mortem* examination of an old gentleman (formerly a truss-maker in this city), and he was also the subject of three hernia, which were not immediately connected with his death.

or about the wound. The intestine appeared to have recovered itself.

CASE III. *Femoral Hernia; very tightly strangulated: Formation of Artificial Anus on the Eighth Day: Recovery.* D. F., aged 45, was admitted in the evening of January 17th of this year, suffering from strangulated hernia on the right side. She had been the subject of rupture for many years, but never wore a truss. It had been down for twenty-four hours, and some efforts at reduction had been made. The tumour was hard and tense and painful; she had vomited, and the abdomen was tender.

I applied ice for an hour, then gave her chloroform, and tried the taxis, but that having failed, I operated. There was no difficulty of any kind about the operation, which was straightforward in every respect. I could find no aperture under the ligament which would enable me to divide the stricture without opening the sac, and when this was done, I had considerable difficulty in finding any crevice through which a blunt curved director could be passed. After a little time, I succeeded in dividing the edge of Poupart's ligament with a probe-pointed bistoury, and returned the intestine immediately. The gut was excessively black, but firm in texture and shining on its surface. The wound was brought together with two sutures and a compress, and when she awoke from the chloroform, she said that she was easier.

January 18th. She was going on well. The abdomen was tender and the skin hot, but she slept and had passed flatus *per anum*.

January 19th. She was better, but complained of heartburn and pain in the stomach, for which a little alkaline medicine was ordered. In the evening, she was feverish, and I ordered her a grain of calomel with a quarter of a grain of opium every three hours.

January 20th. The bowels had been open, and she was better, but from this date until January 23rd she was very feverish and low, and I ordered her some wine. The sac sloughed and projected at the wound, with some discharge of an excessively fetid matter, some being of a yellow colour. The bowels had been moved.

January 24th. The yellow matter had much increased in quantity, and turned out to be fecal; the flow of it from the wound was copious, and she felt better, but the bowels had not been moved in the ordinary way. She was ordered to take eight ounces of wine a day, and to have some eggs, and middle diet.

January 31st. During the past week she had great fecal discharge from the opening in the groin, but at this period I removed a slough from the wound, and the flow ceased for a time.

February 3rd. The flow returned, but on the 7th it ceased finally. The bowels were moved naturally on the 3rd (with the aid of castor oil).

February 10th. The wound was well.

When this patient got up she could not stand upright, owing to the dragging from the wound; but this gradually ceased, and she went out quite well, but within the last month I have heard that a swelling has appeared at the side of the scar of the wound left by the operation.

REMARKS. The stricture was so tight that in twenty-four hours the intestine had not only become quite black, but it was so pinched that a small portion of the circumference lost its vitality and poured out the contents through a little opening fortunately circumscribed by adhesions, which healed spontaneously afterwards. At the time of the operation, after I had divided the stricture, and returned the intestine, the aperture was so small that it would barely admit my little finger. I cannot help thinking that the chance of recovery in this case would have been lessened if I had succeeded in my attempts to divide the stricture and return the intestine without opening the sac.

CASE IV. *Strangulated Femoral Hernia: Intestine much damaged by previous Manipulations: Operation: Recovery.* Mrs. C., a healthy woman, of 60 years of age, and of good courage, who had not been the subject of rupture, was admitted under my care on March 25th of this year. The tumour appeared on March 23rd, and on the 24th, considerable efforts at reduction had been made, but without avail. The bowels had been slightly open, and she had vomited.

When she was admitted she was sick, and the abdomen and tumour were painful on pressure. I tried the taxis, which failed, and then I operated. I tried in this case also to divide the stricture without opening the sac, but could not do it; I therefore opened it, and found in it some dark jelly-like sub-

stance, being the serum of the blood squeezed out and coagulated. The intestine was very black, collapsed and ragged on the surface. The stricture was unusually tight, but gave way at once on the application of the bistoury, and the intestine went back.

In the evening, she complained of great pain, and there was a large flow of serum from the abdominal cavity. Pulse 140. She was ordered to take three grains of calomel and ten of Dover's powder at once, and to repeat the dose on the following morning.

March 26th. Pulse 150; tongue dry. She was still vomiting. I therefore ordered her two ounces of wine with ice, and found that after a few hours she felt better, and the pulse sank to 120, and her tongue became moist. The abdomen was very tender.

March 27th. She was better; but the abdomen was much distended and tender; the wound was in a healing way. Considering that she had some low peritonitis, I ordered her a quarter of a grain of opium and three grains of blue pill every four hours, with four ounces of sherry wine daily, and under this treatment she gradually improved, with the only drawback of having great difficulty of passing urine, and distension of the abdomen on March 29th.

March 30th. Her pulse again became quiet, and her mouth a little sore from the blue pill, and she passed flatus *per anum*.

She then took the pills three times a day for a short time, and the bowels began to act in a natural way, her appetite returned, and in a few days she went out cured.

REMARKS. The result of this case was very satisfactory, for the intestine was so damaged by the tightness of the stricture and my manipulations, that it was very doubtful whether it could recover itself, and it was a point of considerable importance to keep the canal quiet, and give the vessels of the strangulated part time to return to their usual functions. Although the patient required stimulus to keep her up, the relief from all the symptoms immediately, when the mercury showed its effect upon the mouth, was most marked.

CASE V. *Femoral Hernia: Strangulation: Operation: Recovery.* Mrs. R., aged about 50, had been subject to rupture for some time, but had suffered but little inconvenience from it. It became strangulated on the 4th of April last, without any very urgent symptoms at first. Pressure was applied by the hand, and with a compress and bandage; and the tumour seemed to disappear. She was given a fair share of active purgative medicine, without any good effect.

I saw her on April 7th, and found a tumour in the left femoral region, which was very tender; the pain extended all over the abdomen, and she was constantly crying and vomiting, and was excessively prostrate.

I operated at once, without chloroform, and found no fluid in the sac. Some omentum occupied the anterior part of the cavity, and behind was a small knuckle of dark coloured intestine, of healthy consistency. I divided the stricture upwards and inwards, and the intestine slipped easily in. The omentum seemed hard and thickened by a long stay in the sac, and I therefore left it in the wound. The parts were brought together by two sutures and a bandage. She vomited once soon after the operation, but from that time went on well. The next day, diarrhoea set in, excited, in all probability, by the remedies taken before; but this was checked by suitable means, and she progressed rapidly and uninterruptedly, without any other untoward symptom, until she was well, which was in three weeks after the operation.

REMARKS. This case requires no comment; it was straightforward and simple in every particular, according to the description given in our surgical and anatomical books—just such a case as one would like to fall in with for a first hernia operation.

CASE VI. *Recent Femoral Hernia, from Accident: Strangulation: Operation: Sloughing of Sac: Recovery.* T. B., aged 60, employed as a farm-labourer in the last harvest, fell off a hayrick on July 9th. On July 10th he began to vomit, and he continued to do so until he was admitted, on the morning of the 13th. The swelling of the left groin was discovered two days after the injury. He had never been ruptured before, and his bowels had been slightly moved on the day before his admission. He was brought in an open cart twelve miles, and was much chilled and depressed. The tumour was very painful, and the integuments were red and œdematous, and his abdomen tender.

I operated at half-past five on the morning of July 13th, cutting down upon the tumour; for I was unable to pinch up the skin because of the œdema. When I had cut down to the

sac, some white thick matter oozed out, which appeared to be puriform matter in the cellular tissue outside the sac. The latter contained dark coloured serum, of the usual appearance; and only a small portion of the calibre of the intestine was engaged in the opening. The protruded part went back as soon as I had divided the lower edge of Poupart's ligament upwards. I had given him an ounce of brandy and thirty drops of Battley's sedative before the operation. He also took chloroform well, and knew nothing of what had been done to him afterwards, but said he was quite easy. He did not sleep after he was removed to bed; and I therefore ordered him ten grains of Dover's powder with four of calomel; and, in the evening, his tongue was moist, but the abdomen was tender, and he had retention of urine, requiring the use of the catheter. He was ordered an opiate draught at night, and a calomel and opium pill three times a day. The bandages were divided at night.

On the next day, he passed urine: the wound was much inflamed, and his abdomen very tender. The wound was ordered to be poulticed.

July 15th. He was very low and sinking, and was ordered to have four ounces of wine, which revived him before the evening.

The next day, by some casual omission, he did not get his wine, and at night was very low again. The bowels had not been moved, nor had any flatus escaped. He had great difficulty in passing urine. The abdomen was tumid and hard. I ordered him six ounces of wine daily, and to take two drachms of castor oil, with twenty minims of turpentine, at once.

July 17th. He was "five pounds better". In the afternoon, he passed flatus, with great relief; but there was no further action of the bowels. I therefore ordered the draught of castor oil and turpentine to be repeated.

July 18th. His bowels were gently open. The wound had been very unhealthy, and after poulticing the whole of the sac appeared to slough out, and by July 21st he was convalescent.*

CASE VII. *Enormous Scrotal Hernia, of long standing; Symptoms of Acute Strangulation: Operation: Death in Eight Hours: with Air in the Veins.* G. D., aged about 35, a labouring man, had been subject to a large scrotal hernia of the right side for a long time. The tumour always came down by day, and went back at night; and he never wore a truss. On one occasion, it became much swollen, and there was great difficulty in returning it. This, however, was ultimately accomplished.

On August 11th, he was admitted under my care. It appeared that he had finished his work in the morning, and that his bowels were being moved, when the hernia suddenly came down to a large extent. I saw him a few hours after his admission, and found him with a tumour of the scrotum much larger than the head of a child at birth. It was very tense and very painful, and was dull on percussion at the neck, and clear at the prominent part of the tumour. His abdomen was also a little tender, but chiefly at the epigastrium. Cold had been applied for a few hours, but the tumour had become more tense. I tried the taxis fully, while he was under the influence of chloroform, holding the neck of the tumour in the proper position and direction with my two hands, while one of my colleagues maintained firm and steady pressure upon it, for it was too large and unwieldy for one pair of hands to manage. Finding it immovable (and there was not even the slightest impulse given to it when the man coughed), I punctured it with a grooved needle, and let off from the sac about two ounces of red fluid, and some little gas from the intestine; and then tried the taxis again, but to no purpose; and I therefore proceeded to operate.

When the sac was reached, and opened to the extent of about two and a half inches, some red serous fluid escaped, and the intestine presented itself, turgid, tense, and very black. At first it appeared to be the cæcum and ileum, but afterwards it became evident that small intestine only was contained in the hernia, and that it was all much distended with gas. I found that I could pass my forefinger at once through the ring and under the stricture; but the pressure was extremely hard, so as to make my finger ache. I could distinctly feel two hard rounded cords, one behind the other, pressing upon my finger; and these were the inner and outer abdominal

rings, which had become parallel and opposite one another by the weight and constant pressure of an old and heavy hernia. These hard cords were firmly contracted, and felt like the round tendons of some of the muscles of the extremities. I divided the anterior cord, and made the opening freer, and tried to return the intestine, but in vain. So much of it occupied the scrotum that I could not get it back; and, after varied attempts for at least half an hour, I divided the margins of the ring more freely, and ultimately returned the whole. The mesentery was dark, as well as the intestine; and I could distinctly see points of extravasated blood in its substance. One small patch of peritoneum (rather larger, perhaps, than a fourpenny bit) was split away from the surface of the ileum. The intestine was thickened, and not very firm. After it was all reduced, I had the greatest difficulty in bringing the parts together, and keeping the intestine within the abdomen; but it was at last satisfactorily accomplished with a compress and bandage. The patient was under chloroform for an hour at least, and bore it well; for the pulse was pretty good, even at the end.

I ordered him an opiate draught; and, when I came down to see him at 8 the next morning, I was dismayed to find that he had died at 7. He had been seen by the house-surgeon at 2 A.M., when his breathing was hurried, and he had been sick; but his pulse was good, and he did not complain much. He was seen at 4 A.M. by the assistant house-surgeon, who, finding him lying round on his face and apparently asleep, did not disturb him.

POST MORTEM EXAMINATION, at 4 P.M. (*i. e.*, about nine hours after death). The weather was very hot. The body was so swollen and disfigured that I could not recognise my patient of the night before. The face and neck were dark purple and tumid, crepitating under the fingers. He was also purple and green about the wound, and over the parietes of the abdomen and pelvis, and on the scrotum and penis. There was no blood in the abdominal cavity, but some little was extravasated among the muscles. The stricture at the rings had been entirely divided, and the opening was patulous. The intestines were removed; they were filled with gas, and the portion that had been strangulated was very distant from the rest, being almost black, thick, distended, and separated from the healthy intestine by a well marked constricted line. It was the ileum, and measured fully *two yards and a half* (all of which was quite black), reaching to within an inch of the ileo-cæcal valve. Blood was extravasated into the substance of the gut, and it appeared to be on the point of becoming gangrenous.

The only other remarkable fact connected with the *post mortem* examination was the *presence of air in the veins*. A large thyroid vein, the internal mammary, the iliacs, the vena cava, and the vena azygos, were distended with gas. The vena cava inferior, where it lies by the side of the aorta, looked like a piece of the small intestine of a child fully distended with air. Frothy blood was in the heart, an accumulation of air in the ends of the auricular appendages, froth in the spleen, in the cellular membrane, and in the integuments. The appearance of the corpse was that of a man drowned, or otherwise asphyxiated; and I believe that he died from the presence of air in his circulating system, but how it got there I cannot form any opinion. The intestine, after only twelve hours strangulation, was so damaged that he must certainly have died; but this condition of his veins was undoubtedly the immediate cause of death.

His pulse was good for some time after the operation, and he rallied well after the chloroform. He only took half an ounce.

REMARKS. I am not aware whether there is any case on record where so great a length of intestine (nearly eight feet) was so thoroughly strangulated and disorganised in so short a period. There are three interesting cases of air in the veins (producing death) recorded by Mr. May of Reading, in the JOURNAL of the present year (No. xxix), which much resemble that above described in some important particulars, and with which my case might be conveniently classed. Mr. May alludes in his paper to the records of many other similar instances, and adds the disagreeable fact that, in six deaths from chloroform, air has been found in the heart.

In the case which I have just narrated, the operation was urgently required to give the patient a chance of his life; and he died from the presence of air in the veins, but whether caused by the prolonged operation, or by the chloroform, or the damage produced by the disease, I am quite at a loss to determine.

* I have since heard, in a casual way, that his hernia had reappeared, and that his condition now (about three months after the operation) is very precarious.