Cooper (A)

OPERATION

FOR

STRANGULATED

INGUINAL HERNIA;

FROM THE TREATISE BY

SIR ASTLEY COOPER, *Bart.*

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Sir A. Cooper's treatise on HERNIA, part 1st, folio, was published 1804; part 2nd, 1807, price dol. 42.—In 1812, the author said he could not procure a copy of it, which he was desirous of sending to M. Scarpa.

INGUINAL HERNIA.

No disease, belonging to surgery, requires in its treatmen greater anatomical knowledge, with surgical skill, than hernia. Symptoms, immediately threatening extinction of life, occur at times, in situations, that afford but little opportunity for consulting others, and demand a prompt resolution and decisive practice, specially to meet occurrences, when the knife becomes the only method of saving the patient.

The operation should be performed before soreness of the belly under pressure occurs.

The patient is to be placed on a table, about three and a half feet high, his body horizontal, except the shoulders a little raised, his legs, as high as the knees, hanging down over the edge of the table, and the thighs a little bent, to relax the abdominal muscles. The bladder should be emptied, the diseased side shaved. The surgeon, between the patient's thighs, grasps the tumour with his left hand, and with a scalpel in the other, makes an incision the whole length of the tumour, unless it is very large, beginning

opposite to the upper part of the abdominal ring, at the middle of the sac, and ending at the bottom of the tumour in the same direction.

This incision, through the skin and cellular membrane, divides the external pudendal artery, which always crosses the sac and spermatic cord near the ring. The bleeding may be stopped by an assistant's finger, or by ligature. The incision exposes the fascia from the external oblique muscle, which forms the first and thickest covering of the sac. The middle of this fascia is next cut through, and a director, introduced beneath it, is carried upward (toward the head) to within an inch of the ring, and the fascia divided upon it; turning the director downwards, a similar division of the fascia is made to the bottom of the tumour. This opening exposes the second covering of the sac, viz. the cremaster muscle, which must be divided upward and downward, as the fascia. To surgeons not accurately acquainted with the anatomy of the part, these layers cause great embarrassment and delay; the operator, expecting to see the sac as soon as he has divided the integuments, cuts the fascia with extreme caution, fibre after fibre, from fear of injuring the intestine, mistaking this thickened covering and the cremaster for the sac.

When the sac is exposed, if the hernia is intestinal, and the intestine does not adhere to the sac, fluctuation may be generally perceived at its anterior, inferior part when the tumour is grasped and the fluid it contains pressed forward.— The surgeon pinches up by dissectors' forceps, some of the cellular membrane which closely adheres to the anterior, inferior part of the sac, places the edge of the knife horizontally, cuts a hole to admit the blunt end of a director, on which the sac is to be further divided, to within an inch of the abdominal ring, and to the bottom of the sac. The reason that the anterior, inferior part of the sac is selected for the puncture is, the intestine seldom descends so low; if it does, a fluid is generally between it and that part of the sac, unless the intestine adheres to the sac, or the hernia is omental. If the intestine and omentum have descended, the latter generally covers, sometimes envelopes, the intestine. The omentum is only a shade darker than natural; the intestine is covered with coagulable lymph.

The surgeon carries his finger into the sac to examine the situation of the stricture; he will find it at the abdominal ring; 2ndly, where the sac opens into the abdomen, *i. e.* from 1½ inch to 2 inches above it, outwards towards the spi-

nous process of the ilium, occasioned by the lower edge of the transverse and oblique muscles, or at both places: 3dly, in the mouth of the hernial sac; pressure of parts above the ring has been often mistaken for this sort of stricture.

If at the abdominal ring, the surgeon passes his finger as director into the sac to the stricture, then a probe-pointed bistoury between the ring and the sac, and insinuating it within the ring, cuts through it *directly* upward, (to avoid the epigastric artery) opposite to the middle of the sac, sufficiently to return the parts without violence. In general, if the finger can be readily admitted into the abdomen, the dilatation is sufficient.

If the stricture is of the 2nd sort, the surgeon introduces the flat side of the bistoury towards the finger, till he insinuates it under the stricture; then turning the edge of the knife forward, by a gentle motion of its handle he divides the stricture sufficiently to allow the finger to slip into the abdomen; the knife is then withdrawn with its flat side towards the finger. This orifice is divided straightly upward opposite the middle of the mouth of the sac.

If the stricture is within the sac, dilatation of the transversalis is insufficient to liberate the intestine. Then the finger being carried within

the sac to the stricture, a curve probe-pointed bistoury, whose cutting edge begins $\frac{1}{4}$ of an inch from the point and extends 1 inch towards the handle, with its side upon the sac, is carried into the stricture; the edge being turned towards the stricture, it is divided by a gentle motion of the knife's handle forwards and upwards, opposite to the middle of the front of the sac. Avoid injuring the intestine, which is liable to be cut.—It is said omentum sometimes causes stricture, enveloping the intestine, and becoming thick round it.

Observe whether the brown colour of the intestine lessens. The veins on its surface may be emptied by pressure, and their sudden filling noted; the intestine should be pulled down a little to see the part which has been compressed by stricture. If the intestine appears to have free circulation, the surgeon should gradually return it, thrusting up an inch at a time, securing each part with his fingers, until the whole is returned. In a woman, but slight pressure had been used to return the intestine; it had been strangulated 44 hours; it *burst*, and the contents were extravasated into the abdomen.

In returning the intestine, put the patient in the same position as when the attempt at reduc

tion is made without the knife. (*See p.* 18, *note.*) If the intestine adheres to the sac extraordinary caution is required on opening the sac, as it contains little or no interposed fluid. If the bands of adhesion are long enough to allow of the intestine being drawn a little from the sac, they may be separated by dissection ; else, cut off portions of the sac, and return them adhering to the bowel, into the abdomen.

To divide these adhesions, the sac should be dilated to its mouth, the tendon of the external oblique muscle slit up to the part at which the hernia descends. There is great danger of wounding the intestine.—When the convolution of intestine has its sides glued together, separate them before the intestine is returned.

A patient of Mr. Pidcock, of Watford, had a large hernia, strangulated colon, much discoloured, its fatty appendages still more so ; they did not recover their hue when the stricture was removed ; I therefore *cut off* all these, and returned the bowel. No hemorrhage ensued, and she recovered.

When the intestine has been returned, the omentum, if healthy, and not of very considerable bulk, should be returned into the abdomen by as slight pressure as possible. If very bulky, the surgeon, raising it, whilst an assistant grasps

it higher up to prevent its return into the abdomen, cuts it off near the mouth of the sac. Some small arteries bleed, which are to be secured by fine ligature; when the hemorrhage is stopped, the omentum is to be returned, with its divided surface applied to the mouth of the sac, from which the ligatures are suspended; it thus forms a plug to its cavity.

If there is suspicion of the omentum being mortified or scirrhous, it should be cut away.— If omentum adheres to the sac, the adhesions may be cut through with considerable freedom; the bleeding vessels being secured, the omentum should be returned.

After hernia is returned, 2 ligatures should be passed, through the integuments only.

MORTIFICATION.

The tumour which was tense, elastic, red, becomes soft, doughy, purple; air can be felt crackling in the cellular membrane. Hiccough and tension of the abdomen continue: vomiting is less frequent. The pulse is intermittent, fuller, softer; eyes glassy. The hernia sometimes returns without assistance, and the patient survives but a few hours.

The intestine is of dark purple, or has lead coloured spot or spots, which readily break under the finger. The other part of the intestine is of a

chocolate-brown, often mistaken for mortification. Every part of the intestine is covered by brown coagulable lymph.

"Mary Perkins, æt.60, a poor woman, at Kingswood, appeared sinking fast, under crural hernia. She fell down stairs a fortnight before, and soon after discovered a tumour in her groin, which gave excruciating pain, produced vomiting and constipation, which had continued from that period to the time I saw her. *Mortification had begun*; no other direction was given but that her strength should be supported. In a few days the mortified parts began to slough; the whole of the feces passed through the artificial anus, 3 months, during which time several inches of one of the small intestines were discharged at the wound. At the expiration of 3 months, a small portion of the feces began to take the natural course; the quantity gradually increased till, 6 months from commencement of the symptoms, the feces passed entirely by the rectum, and the wound healed. A few days after mortification had began in the groin, a tumour formed near the ilium, on the same side, which mortified; an inch of intestine was discharged; the wound continued open a month. She took large quantities of bark and cordials

during confinement, and is now as well as she has been for many years." J. COOPER, *Surg.*

Wotton Under Edge, Gloucester.

A patient of Mr. Cowell, in St. Thomas' Hospital, had, a long time, irreducible omental hernia on the right side ; *a second protrusion formeda tumour on the outer side of the old hernia.* This last became strangulated ; the operation was performed ; the protruded *intestine* was found *mortified*, and was therefore *left in the sac.* For 3 weeks after, feces were discharged in part from the groin, most by the anus. A month after the operation, the intestine began to protrude at the wound, became inverted, and from that time the feces ceased to pass by the rectum. He lived 11 years more ; he died 1778. Part of the colon, opposite the entrance of the ileum, and the ileum itself had sloughed away ; adhesions of the intestines to the orifice of the wound, and to each other, had prevented feces escaping into the abdomen ; whilst the ileum was preserved from protrusion, feces escaped in part intó the colon ; when a protrusion happened, communication with the colon was stopped.—During the healing of the wound, support the intestine and prevent its inversion.

If a small hole only has been produced, the intestine should be returned into the abdomen,

except that portion in which the hole is. A needle and ligature should be passed through the mesentery at right angles with the intestine, to prevent its including the branches of the mesenteric artery which supply that part of the intestine, then through the mouth of the sac; tying the thread, the intestine becomes confined to the mouth, and the feces pass from the opening, but in part by the rectum. The intestine is gradually shut, and an artificial anus is effectually prevented.

"July, 1794, a man, æt. 22, had, for six days, strangulated hernia of the right groin; the symptoms had been, five days, so mild, they had not excited sufficient alarm. He had constant sickness, tight belly, extreme soreness of the tumour, without any stool for the above mentioned period. The sac was without fluid, closely embracing a considerable portion of the ileum, which, with the sac, was gangrenous. On endeavouring to separate, in the most tender manner, the gut from its adhesions, it burst, and its contents immediately escaped. Effecting the separation, so as to draw out the whole of the diseased part, with a sufficient portion of mesentery, 4 inches of intestine were found destroyed, *which and the gangrenous* portion of the sac were *removed.*

Gastroraphy being effected, two stitches were passed through the mesentery on each side of the divided intestine, and secured to the parietes of the wound. An emollient clyster was thrown up, and cloths moistened with spirit applied over the abdomen. He was ordered an opiate, and lightest food sparingly.

On the morrow-evening no evacuation had passed by stool, his belly was more distended, he was equally sick as before, now and then teased with hiccough, the wound seemed very unhealthy. I removed the stitches on the intestine, bringing its open extremities just without the wound, to allow discharge of air or feces from the superior part of the canal.* In the night, when he appeared almost expiring, a sudden, violent discharge of air and feces burst from the wound in immense quantity. Immediately his pulse rose, comfortable warmth succeeded, his stomach became settled, hiccough left him, and from that day each symptom became more promising.

10th day, the parts looked so well and healthy, I again brought the extremities together by suture. Most of the stitches gave way to the con-

* Qu. Might it not be proper, on any such occasion, to allow time for escape of accumulation above the divided part?

tinual pressure to which they were exposed.— Union was effected at the sides of the intestine; the sections there consolidated resembled a double-barrelled gun. Feces continued to pass wholly through the wound, till the patient, accidentally having made slight pressure on the part, soon after felt inclination for stool, which, by the usual efforts, he passed to his great joy.

It occurred to him, compress and bandage might assist him to gain power of natural discharge. He had daily discharge of feces and wind per anum, could prevent escape by the wound, of feces however liquid. He was supplied with a truss, which completely answered the purpose.

From the time of the operation, the wound underwent very considerable changes. At first, the patient being quiet in bed, making little or no exertion of the abdominal muscles, the wound remained on a level with the surface of the integuments; when he began to give his body more motion, the wound sunk inward, the extremities of the intestine appeared at the bottom of a sulcus, forming near half a cylinder, an inch in diameter. He could walk about his grounds, get on his horse, without restraint."

Mr. Nayler, *Surgeon of Gloucester-Hospital.*

Bispham, a woman of Tottenham, had for many years femoral hernia, which, in the summer of 1801, became very painful, without interrupting the regular course of her bowels, and confined her to her bed on account of the extreme pain she felt on attempting to put her leg to the ground. She remained several days in this state. I made several fruitless attempts to reduce the hernia, and, a week afterwards, as pain and inability to move continued, the operation was performed. A minute portion of inflamed intestine firmly adhered to the mouth of the sac. Feces were able to pass it; it became painfully compressed at every attempt to extend the thigh, which was the cause of the inability to move. With great care the adhesions were separated, and the intestine returned. The sac was large, and had been considerably detached from the surrounding parts. I easily *dissected away the whole sac;* then passed stitches through its mouth so as to bring the edges into perfect contact. The ligatures were drawn out of the external wound. 6th day the ligatures came away; the wound was healed the 10th. A month after, I saw the woman; hernia as large as the first, had formed on the same spot. She came for a truss, finding on every attempt at exertion she felt a powerful forcing-

down in the tumour, which was rapidly increasing. I saw her two years after; immediately on removing the truss, which had been worn ever since the operation, the hernia freely descended.

C. Beegey, æt. 54, admitted into St. Thomas' Hospital, Friday, Feb. 4, 1803, had been subject to hernia from his earliest years; it was produced by a bruise on the pummel of a saddle. It had always been in a great degree reducible; whenever he emptied the sac as much as he could, something remained in it. Monday, Jan. 31, it became painful whilst he was at work, and could not be in any degree reduced; almost at the same moment he was seized with colic and vomiting.

Tuesday, Feb. 1, all the symptoms were increased; he had had a small stool; it afforded him no relief. Wednesday, Thursday and Friday, the symptoms continued to increase; he was then admitted into the Hospital. The tumour was *enormous*, reaching half way to the knees, hard, painful on pressure. The abdomen was hard and tense, but little painful. He was sick, occasionally vomited, had had no stool since Tuesday. Many attempts were made to reduce the hernia.

I made an incision, 3 inches long, immediately over the abdominal ring, exposing it with the knife, as well as the fascia it sends off. I made a hole in the fascia to introduce a director, which I thrust up between the ring and sac, *without dividing the sac ;* passing a curve probe-pointed bistoury on it, I divided the ring, introduced my finger, and feeling some resistance from the transversalis, I carried the bistoury on the director to it, and divided it. Slight pressure was sufficient to return the part, which did not adhere. The man was soon relieved of pain. 16 hours after, I found him free from every symptom of strangulation, scarcely suffering from the wound. Whenever he coughed, the tumour increased largely in size, though easily reducible, nor could any endurable pressure keep it supported in coughing. Had the sac been opened, the continual irritation upon its contents, must probably have been fatal. He had no bad symptom ; in a week he could bear a laced truss. In 3 weeks, the wound was healed.

A lady, æt. 68, had long suffered under *enormous* irreducible ventral hernia, now strangulated. Various attempts had been made to return the part. The omentum and intestine adhered to the sac and each other ; return of the

parts was impracticable; the sac was too large to be separated from the integuments and returned. I regretted I had opened it. All that could be done was to dilate the stricture, and sew the integuments closely together. Vomiting and pain in the abdomen immediately ceased: she had a passage through the bowels. Next day, inflammation took place in the integuments and sac, the abdomen became very tender, and 37 hours after the operation she died.

The operation in which the sac is not opened may be employed when the surgeon is convinced, from his general experience, that the parts if reduced, will resume their functions.

NOTE.

The best position for Taxis is by laying the patient on his back, putting a pillow under the pelvis, another under the shoulders, the thighs elevated to a right angle with the body, the knees so close together as only to admit of the surgeon's arm between them: this relaxes the aperture through which the hernia first quits the abdomen.