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ON THE

RADICAL CURE OF HERNIA,

BY

PERITONEAL AND INTERCOLUMNAR SUTURE.

BY

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It is obviously unnecessary to dwell on the great desirability of determining a safe and efficient means by which permanent relief from the inconvenience and dangers of hernia can be obtained. To devise such has been a problem that at various times has much exercised the surgical mind from a remote period of antiquity down to the present time. Though Listerism in this, as in so many other departments in the field of operative surgery, has aided materially in advancing our knowledge as to how to deal with this condition in a more radical and effective way than surgeons of the pre-antiseptic era felt justified in doing—notably by disarming to a great extent what has been not inaptly termed the surgical "bogie" of our predecessors—the peritoneum—still we cannot altogether say we have yet definitely arrived at the wished-for goal, but that we are within measurable distance of it cannot, I think, be denied.

In reference to the subject of radical cure for hernia it is curious, and, in truth, instructive to note in how short a time the pendulum of surgical opinion has swung from the side of scepticism and hostility to that of unwavering belief and warm advocacy. For example, on consulting several recently-published systematic treatises on surgical principles and practice—notably those of Holmes, Agnew, Bryant, Erichsen, and others, in reference to this subject—one cannot but be struck with either the violent condemnation, or practical ignoring of such procedures altogether, that is to be found in these works. Mr. Agnew observes that "after a

[a] Read before the Surgical Section of the Academy of Medicine in Ireland, Friday, January 11, 1884.

careful review of the various operations proposed and practised for the radical cure of hernia, not one can be said to be satisfactory; and it is a question of grave doubt whether, in the present state of our knowledge of the subject, the surgeon is justified in resorting to any other treatment than that of a properly-adjusted truss."[a] Mr. Holmes remarks that of the many operations performed, "it may be said of all of them, even those most recently devised and most carefully thought over, that they usually fail in their object unless assisted by the pressure of a truss—that is to say, that they are not really 'radical cures,' as they are generally called" ("Treatise on Surgery," 1882, p. 635). In the other works I have mentioned, with the exception of Wützer's and Wood's operations, to both of which exception is taken, there is little said either of praise or disparagement. The eminent American author, above alluded to, does not hesitate to express the strongest disapproval, and speaks of some of the methods for the cure of hernia as being "barbarous and repulsive," among which I may mention excision of the hernial sac occupies a foremost place. On the other hand, we must remember that authorities of equal trustworthiness—Lister, Buchanan, Annandale, Banks, Alexander, Wützer, Wood, and others—hold diametrically opposite views—views which would tend to show that the group of procedures to which the comprehensive but somewhat vague term of "operations by dissection" has been given, have been attended with results which should make us hopeful and confident of such operations being ultimately recognised as not only justifiable but essential in the surgical treatment of rupture, whether it be congenital or acquired, reducible, incarcerated or strangulated.

The object of the various operations hitherto proposed and advocated is, in fact, to imitate what Nature does when she effects a cure unaided by surgical art—viz., obliteration of the neck of the sac, combined with approximation and union of the tendinous structures about the hernial passages. This is the principle embodied in the invagination operation of Wützer, in the ingenious but complicated method of Wood, in the transplantation method of Dzondi, in the treatment of local irritation combined with pressure by the method of Belmas, of irritation in the sac by means of goldbeaters' skin and bits of gelatine, by injection of iodine (Pancoast), by scarification (Velpeau), by the seton (Riggs), and lastly, by the so-called method by "dissection," which has the

[a] Principles and Practice of Surgery. By D. H. Agnew. Vol. I., p. 463.

great advantage of enabling the surgeon to deal directly, not alone with the sac, but also with the tendinous structures of the hernial passages.

Of the operations performed on the sac, several have been mentioned by Professor Annandale and others. Among these are :—

I. The ligature of the neck of the sac alone.

II. The ligature of the neck of the sac, and invagination of the ligatured sac into the abdominal cavity.

III. The ligature of the neck of the sac, and excision of the sac below the ligature

IV. The ligature of the neck of the sac with excision of the sac, and stitching together the margins of the abdominal opening (Annandale).

V. Ligature of the neck of the sac close to the internal ring, so as to make the peritoneum flush over the inner opening (Alexander).

VI. Division of the sac into two halves, except at back where it adheres to the cord, one-half folded down over the testicle, the other rolled into a sort of plug, which was pushed into the internal abdominal ring (Buchanan).

VII. Closure of the canal and pillars of the ring by a subcutaneous cross-suture (Fitzgerald).

It will be observed that in the first five of these operations the closure of the neck of the sac is brought about by the application of a ligature, and that in three of them excision of the sac is a prominent feature of the operation. Let us consider what this necessitates, and whether the same result as regards the hernia may not be obtained by simpler means, and means less likely to be attended with serious local and constitutional consequences. It necessitates a tedious and difficult dissection ; for everyone conversant with hernia knows that, as a rule, the detachment of the sac is much easier in theory than in practice, and that to accomplish it a great deal of what Mr. Mitchell Banks, in somewhat odd but expressive language, terms "mauling," is required. Though I should be sorry to apply to this and to excision of the sac such forcible epithets as "repulsive" and "barbarous," still it must, I think, be considered unsurgical, for the simple reason that it is unnecessary, and may be fraught with much secondary local trouble, and possibly constitutional peril.

The great amount of disturbance of the parts consequent on making a sort of artificial tunica vaginalis, as in the operation of Professor Buchanan, and the danger of making undue pressure on

the cord in the operation of Dr. Fitzgerald, would make me hesitate to adopt either method.

The plan which my colleagues and I in the Richmond Hospital, where such exceptionally large numbers of ruptured persons are inspected at the monthly distribution of trusses, have of late adopted in suitable cases, is not the application of a ligature *en masse* round the neck of the sac, or this procedure coupled with excision of the sac below the ligature, but, I believe, a simpler and, at all events, equally efficacious procedure. It consists in the insertion through the opened neck of the sac, and close up to the external abdominal ring, of a deeply-inserted carbolised catgut suture or sutures, according to the size, width, and depth of the neck; and this is followed by the approximation or closure of the canal and pillars of the ring by the insertion of two or more sutures of a stronger and more durable material, such as chromicised catgut, carbolised silk, or silver wire. It is, in fact, a dual system of suture, one being peritoneal and the other intercolumnar. I believe that in the great majority of cases this procedure will be found to be attended with satisfactory results, always provided that rigid Listerian antiseptic precautions are taken during and subsequent to the operation.

I may now state, and I shall do so with all brevity, the particulars of a few cases of hernia, taken among others from my case-book, which will fairly illustrate what I have just observed :—

Case I.—A female, aged forty, was admitted into the Richmond Surgical Hospital, under my care, on July 19, 1882, suffering from strangulated inguino-labial hernia of unusually large dimensions. Previously the tumour had frequently appeared, but there had never been any difficulty in its reduction. Four days before her admission into hospital the hernia had come down, and became very painful. She made the usual attempts to reduce it, but without success. On the following evening she came to hospital, when the resident surgeon succeeded in reducing it, and applied a compress and spica bandage to prevent its recurrence. She then, contrary to advice given, left the hospital, and on the day following the tumour reappeared, but no surgical aid was sought for until three days had elapsed, when she was admitted again into the hospital with distinct evidence of strangulation. The tumour was much larger than when she first sought relief, and was much more tense and painful. All the usual symptoms and signs of strangulation

were present, and in a marked degree. Taxis was carefully employed while the patient was in, and after she was taken out of a warm bath; also when she was under the influence of an anæsthetic. But, all attempts failing, I was then sent for, and at once determined upon performing herniotomy. On opening the sac, and exposing the protruding intestine, I found it of a dark brown, chocolate colour—so discoloured, in truth, that after division of the stricture I had some hesitation in reducing it. However, I did so, and then introduced two fine carbolised catgut sutures through the neck of the sac, one a deep one and the other superficial, uniting its divided edges. Two other sutures of strong, thick carbolised catgut were inserted by means of a nævus needle through the pillars of the ring, on securing which the opening, save at its most inferior and internal part, was found to be effectually closed. The edges of the wound were thus united by several points of interrupted suture, and a small drainage-tube inserted. The strictest antiseptic precautions were taken throughout. It is unnecessary to give an account of the daily progress to recovery of the patient. With the exception of the formation of an abcess in the labium nothing untoward occurred. The rupture never reappeared, and when she coughed there was little or no impulse communicated. On August 2nd she left hospital and returned home, and I had frequently an opportunity of seeing the patient subsequently, examining the situation of the hernia, and satisfying myself of its non-recurrence.

Case II.—D. M., aged forty-four, a house-painter by occupation, a strongly-built man of medium height, was admitted into the Richmond Surgical Hospital, under my care, on November 19, 1882, suffering from strangulated inguinal hernia on the left side. By a curious coincidence he had suffered from strangulated hernia five years previously on the right side, and underwent an operation for its relief at the hands of Mr. Bickersteth, the eminent surgeon of Liverpool.

On examination I found a large inguinal hernia on the left side, the abdomen somewhat tympanitic, and the tumour painful. The strangulation was, according to the patient's account, apparently of two days' duration. He suffered much from hiccough and vomiting, and the other usual signs and symptoms of strangulated intestine. The tumour was very hard, and its integumental covering tense—so much so, that from the first I did not anticipate

that taxis, or anything short of herniotomy, would be likely to relieve the patient. Taxis was tried, but, as I expected, proved unavailing. I accordingly cut down on the tumour, and on opening the sac introduced my finger and found that the stricture was not an exceptionally tight one, but, owing to the enormous coil of intestines which had escaped, reduction was found to be impossible without division of the stricture, which was done by Dr. Corley's hernia knife. Even after this reduction was very difficult, and only effected after a very tedious and protracted effort. There was not much intestinal congestion or inflammation, which was remarkable considering the acute symptoms of strangulation which were present. I then inserted two sutures, as in the former case, through the neck of the sac, and two more of strong chromic catgut through the pillars of the ring, and then closed the wound.

The result of this case was as satisfactory as the former. Some months after the operation I saw the patient, who was so pleased with the result that he urged me very strongly to operate on the other side in order that he might be able to dispense with the truss which he was obliged to wear to keep up the hernia there. I did not, however, at the time see my way to acceding to this request.

This case, I may mention, I exhibited here last session.

The importance of using a more durable material than catgut, whether carbolised or chromicised, for stitching the pillars of the ring, is well illustrated in the following case of congenital inguinal hernia that I operated on last August :—

Case III.—William W., aged three, a well-nourished male child, was admitted into the Richmond Surgical Hospital, under my care, on August 12, 1883, on account of an exceptionally large congenital inguino-scrotal hernia. This had of late greatly increased in size, and was quite as large as a full-sized Jersey pear. No difficulty attended its reduction, and when this was accomplished the external abdominal ring was found to be so large as to easily admit the points of two fingers. No pad or bandage could retain it for more than a few hours. On August 15 I performed an operation with the view of obliterating the neck of the sac and closing the ring. Having reduced the hernia, I made a free integumental incision, commencing from without at a point about a quarter of an inch external to the internal ring, and carrying it downwards and inwards for a distance of fully two inches. The tissues were then carefully divided on a Fergusson's director, as in

the ordinary operation for strangulated hernia, down to the sac. This was opened immediately below the external ring, and the divided edges held well forwards with catch forceps to enable two deep sutures to be inserted, which kept the opposing inner surfaces of the sac in opposition, and in that way the neck was closed. I then approximated the edges of the external ring by a strong, chromicised catgut suture, introduced through the external pillar and brought across the ring and through the internal pillar at some distance from its edge. Superficial interrupted sutures were then inserted and the wound dressed with careful antiseptic precautions. After the operation the case progressed satisfactorily, the wound healed readily, and I then was pleased to find that the parts were so matted together and the ring closed so as to effectually prevent the descent of the hernia. The patient was kept, by my directions, for fully a month after the operation in order that I might observe if it was likely to be a permanent success, and things remaining in the same satisfactory condition, I allowed the patient to be taken home. Three months subsequently I was much disappointed at learning from the mother of my patient that the hernia had re-appeared, and had done so suddenly the day previously while straining at stool. Subsequently I saw the patient, and finding the mother's statement was substantially correct, urged on her the desirability of having the operation repeated, but she declined to accede to this proposal. Should she, however, eventually alter her mind in reference to this, I will, in the first place, use chromicised gut for stitching the neck of the sac, and close the canal and external ring by silver wire sutures. Had I done so in the first instance I believe the cure would, in every sense of the word, have been a radical one.

The result in the following case was more satisfactory:—

Case IV.—Mary B., aged forty-eight, a delicate-looking woman, was admitted into the Richmond Surgical Hospital on the 21st of last May, suffering from a strangulated inguino-labial hernia of exceptionally large size. It was fully the size of a cocoa-nut. It had recently, she stated, greatly increased in size, having been, a short time previously to her admission into hospital, only about the size of an egg. She complained greatly of pain, which she referred mainly to the region of the umbilicus; also of nausea and vomiting, of which she had had several attacks shortly before coming into hospital. The tumour was very hard and painful. On this

occasion I succeeded in reducing the hernia after the use of warm baths and careful taxis. A day or two after the patient left the hospital without any authorisation. On the 26th of May, however, she returned to hospital suffering more acutely from strangulation than on the former occasion. Taxis, employed as before while the patient was in a hot bath, and again after she was taken out of it, did not succeed; nor did any better result attend the operation when tried subsequently by Dr. Corley and myself, the patient being under the influence of ether. I accordingly performed an operation similar in its details to those already described—viz., exposure and opening of the sac, division of the stricture, reduction of the protruding intestine, stitching the neck of the sac, the insertion of intercolumnar sutures (in this case two being employed), and finally closing the skin wound with numerous points of interrupted suture, a small drainage-tube being inserted and left in the lower angle of the wound. The healing of the wound pursued a perfectly aseptic course. On June 3rd the patient returned home, and since then has been frequently inspected, and no evidence of any return of the rupture observed.

Although these cases are few in number and insufficient to enable me to speak dogmatically of the radical cure of hernia by an operation which may be termed peritoneal and intercolumnar suture—a title suggested to me by my colleague, Dr. T. Stoker—still, as far as the cases go, they are of much interest and surgical importance, especially taken with others operated on in a somewhat similar way by my colleagues; and I think it is not too much to say they should make us, if not confident, at least hopeful that we are working in the right path towards determining the treatment that is most likely to prove efficient in the permanent cure of one of the most serious ills to which man is liable—one which in youth and early manhood renders the enjoyment of athletic exercises unsafe, prevents the sufferer entering most branches of the public service, and at times renders his life utterly miserable, from the lasting annoyance of a truss, and the constant dread of strangulation.