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THE PRESENT STATUS OF ABDOMINAL SURGERY.

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The progress of abdominal and pelvic surgery has so far advanced within the last decade, that, from occupying a doubtful position both as to practicability and justifiability, it is now recognized as holding easily the vantage ground of both refinement and attainments. It has vanished opposition and won over its opponents; it has grafted its exact methods of procedure upon all other branches of surgery, and so lent its refinements to their advantage; and lastly, it has, by overthrowing the traditions and fables of surgery, given valuable aid in the line of therapeutics in determining where surgery must begin and medicine end in a line of diseases hitherto considered almost entirely outside the domain of else than physic.

I have deemed it fitting to discuss this subject here at this time because, here in the person of Ephraim McDowell, in Rockbridge county, abdominal surgery was born more than a century ago. Born in Virginia; buried in Kentucky; his resting place is marked by a shaft of Virginia granite; but the monument of his fame is everlasting, though the inscriptions thereon be effaced and the granite crumble, in that dying womanhood and suffering humanity, to the end of time, must rise up and call his genius blessed, that has delivered them.

The question is often propounded at the present day, "To which branch of surgery must be accorded the first place; which branch is most indebted to the others for its advancement; in which branch are the most difficulties to be anticipated during the progress of an operation?" Now, it is easy in any specialty

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to set up and defend a number of points, from which it would appear that this or that specialty may claim prominence. It is easy for the general surgeon to say that in the vast variety of accidents and pathological processes met variously in the body, the difficulties of general surgery are easily in the van. The argument is however fallacious, for though the number of organs and parts dealt with by the general surgeon may, for the sake of argument, be granted to be greater, nevertheless, the relations of these parts, on the average, is not so intimately concerned in the vital processes as those of the abdomen. To ligature an artery, carotid or femoral outside of the body, easily exposed and kept so, is an altogether different matter from tying a vastly smaller one in the pelvis. The methods of procedure in all of the ordinary surgical operations, major or minor, are for the most part a matter of accepted method from the well-known relations of the parts. In abdominal and pelvic work, however, routine—except in reference to instrumental preparation and cleanliness—is not possible, for no operation can be taken as a type of any other, and the complications of one cannot be estimated by the accidents of another. The only thing to rule out failure is to be prepared absolutely for anything, from complete packing of the pelvis to control hæmorrhage, to the resection of intestine, removal of kidney, or the uterus.

With this understanding of abdominal surgery, it is not difficult to see that what promises to be the simplest operation may turn out the most difficult, and that the terms are only of an average; the requirements of this branch of surgery are *facile princeps* in requiring a special training and its difficulties especially its own. To say that a general surgeon without such training can do such work, is to argue that he can just as well do eye work or brain surgery. That now and then a general surgeon has excellent results in this special work, is no more argument that special surgeons are not required in it, than to hold that because Blind Tom has mastered the technique of music without lesson or instruction, he is not an idiot, and there is no science of music. It is clear then that the work of abdominal surgery is distinctive. Let us now consider briefly the procedures pertaining to it, and the approved methods of dealing with the many pathological conditions encountered.

We may start with *pelvic abscess.* Here the radical abdominal interference is especially to be compared with the old (and by some still followed) method of vaginal puncture. Vaginal puncture is a dangerous procedure, in that it cannot be told what organs are involved in the abscess wall. The abscess again may be multiple, and therefore, puncture will only open a single cavity, and may leave three or four untouched, and the difficulty of the case be left unsolved. To say that these abscesses are often outside of the peritoneum is no argument against the abdominal operation at all, for if this is true, careful manipulation may evacuate the pus entirely without opening the peritoneum. Again, it is to be remembered that nearly every case of so-called pelvic abscess takes its origin from a diseased tube or ovary. This being the fact, it is at once apparent, that the absolute removal of the focus of the disease is the only way of effecting a cure. The tediousness of the healing process by the method of puncture, is so well appreciated in even the most uncomplicated cases, that this alone is a most telling argument against it.

At the present time, *operations for the removal of cancerous or myo-fibromatous uteri,* are claiming especial attention, for the reason that when first originated these operations were regarded with especial disfavor on account of their primary mortality. It is not my purpose to speak especially of the removal of the uterus for cancer, but to consider the operation as necessitated by myomatous or fibro-cystic tumors. Experience has amply shown that this latter operation, carefully performed, so as completely to shut off the peritoneal cavity from the surrounding tissues, a technique which must be freed from every loophole of error, is at once the key to the operation and the salvation of the patient.

Another feature of the operation is the use of the clamp, or serre-nœud, as the great essential in the instrumental technique of the operation. This fact is especially interesting from the fact that certain sentimental surgeons at once insist upon the barbarousness of the instrument, and claim that if the operation is to stand, an intra-peritoneal method of treating the stump must be devised. The line of argument in a life-saving operation that would insist upon the abandonment of an instrument simply because, from their ultra ideas of refinement, it is "barbarous" we suppose would refuse succor in a storm, because the boat sav-

ored of fish. Plainly to the clamp belongs the credit of giving to hysterectomy its acknowledged position as a justifiable surgical procedure. By its use I have now completed a series of *twenty-seven hysterectomies without a death.* The course of the operation was smoother than the average ovariotomy, and gave me less concern, because I had the danger point under my eye all the time. I am morally sure that if hæmorrhage occurs I shall see it, and when seen, it is easily controlled. Herein lies the value of the clamp, and at this stumbling-block the intra peritoneal methods of dealing with a stump often as big as a thigh must be uncertain and therefore dangerous. To say that suture and ligature, inasmuch as they control hæmorrhage elsewhere, will do it here, is to argue without a due appreciation of the facts, or a very limited experience; and just here the general surgeons fall short. There are many stumps that will not safely hold a ligature, and even when they do, the danger from after shrinkage is so great that it is not by any means certain that the ligatures employed will not altogether fail.

The *method of making a stump* is one not to be easily described, nor is it uniform. Each stump must be made according to the exigencies of the case. The general rule is to free the bladder, save the peritoneum, dissecting out the tumor until sufficiently free to engage it with the clamp. The after technique involves the closure of the pelvic peritoneum, and the embracement of the stump by the parietal peritoneum so as to close off the peritoneal cavity absolutely.

Following closely in importance for the relief of uterine fibroids of a myomatous nature is the *removal of the appendages.* When this is possible, the relief afforded is, in most instances, immediate and permanent. It must not be premised, however, that the removal of tubes and ovaries, in cases of uterine fibroid, has its counterpart in the operation under the simpler pathological conditions. In the latter, it is often the easiest of the easy operations; in the former, it frequently becomes a most serious undertaking—often is impossible, eventuating in hysterectomy in cases where such a conclusion was considered the remotest of contingencies, if considered at all. This is another illustration of the complexity of abdominal work. The mortality in removal of the appendages in uncomplicated cases of fibro-myomata should

be about *nil.* The mortalities of dabblers in abdominal surgery have no right to be considered. Closely related, in a clinical light, as dealing with the uterus, are the *Porro and Cæsarian operations.* These, of course, have an obstetric relation, and in many points must be so considered, so far as their necessity is concerned. The average obstetrician is, however, far from being prepared to perform either of these operations, and hence they will fall, in most cases, into the hands of the abdominal surgeon. As an operation of utility—*i. e.*, accomplishing its purposes and removing a chance for the necessity of re-operating, the Porro is to be preferred. In addition, with the perfected method of doing hysterectomy, it is, I believe, in competent hands, much the safer operation, though, so far as statistics are concerned, this is, perhaps, open to question; but, all things considered, as I have shown in a previous paper, the Porro operation should be the safer operation, and I have no doubt it will ultimately be so recognized.

The *Cæsarian section,* simplified and perfected to conform with the modern surgery of the abdomen, is outside of the unfavorable conditions for perfect suture of the uterus—a simple operation—so much so that it has been sought after as a cheap means of advertisement of late years in many cases in which it was not at all justifiable.

Ectopic pregnancy may be considered at this time as related indirectly with the uterus. That is, there are uterine symptoms in connection with it. These are not, however, in any sense pathognomenic of pregnancy, and may be simulated by various pelvic pathological conditions. So far as the diagnosis is concerned, I shall not argue the question further than to say that out of an operative experience of over thirty-eight cases in which its existence was proved in every case beyond question, I have so often been deceived or in doubt, that I cannot, for an instant, agree with those who insist upon exact and positive diagnosis in this most serious of the abdominal pathological conditions. I have not, it is curious to remark, observed a so-called intra-ligamentous variety of this condition, and, accordingly, am somewhat skeptical as to its frequency and the correctness of the pathology advocated by Hart and Carter, as shown by frozen sections. I may be in error as to this, but believe the matter should be fur-

ther investigated before it is considered settled. As to operation, this should be done at once when the condition is discovered; and, if strongly probable, exploratory incision should be made. The earlier the operation, the safer it is. Delay, for the sake of saving the child, I regard as illogical, unless it is clearly felt to be also more safe for the mother.

As to the *method of dealing with the placenta*, this is perhaps not settled. In all cases, when at all possible from the nature of its attachments, it should be removed. When this cannot be done, of course there is nothing else to do but leave it under conditions as favorable as possible. It should be emptied of its blood, made as dry as possible, the cord cut close and tied, and the abdominal cavity closed.

The peritoneum will probably digest it, which, thanks to its vast absorbent power, will likely, in most cases, with clean operation, remove what would otherwise negative the operation.

In all of these operations so far referred to, it must be remembered that there are no hard and fast lines of treatment invariably to be followed, step for step, in every case. A knowledge of the expedients and resources of all complications will bring in variations that are valuable and indispensable for the successful accomplishment of their surgery.

In all cases of prolonged operation, especially in threatened shock, and after hæmorrhage, and in the presence of pus or debris, the value of *flushing out the abdomen with moderately hot water* is beyond question. In puerperal peritonitis, such procedure comes in as a valuable adjunct in removing the pus and relieving shock. This latter operation is still in its infancy, so far as its appreciation is concerned. Abroad it has not met with success, according to Mr. Bantock; but along with drainage, and an early appreciation of its presence, there is much to be hoped in this line. The point specially to be urged is that, in cases already in collapse, only sufficient be attempted temporarily to save life.

After operation, it may be required to put the patients in a sound condition, but this should not be undertaken until there is reasonable assurance that they can endure it. The ideal surgery is the surgery that saves life, and not that which records a techni cally complete operation, followed by a death certificate.

In these operations, characterized by overwhelming quantities of pus, it is noticeable that there is no need whatever of the use of antiseptics. Pure water, fresh from the tap, or if possible distilled, thoroughly cleanses the abdomen, the temperature falls, the pulse slows down, and the Listerien system of germicides is, once for all, proven absolutely needless, so far as abdominal surgery is concerned.

In all abdominal surgery, it must ultimately be accepted that *germicides are useless*, and may be harmful. The same may be said of opium, except in cases in which the opium habit has already been acquired.

As to the time for entering upon the operations for the various conditions referred to, it is now an axiom of surgery not to delay longer than to establish the fact that operation will be necessary at some time. This once granted, the earlier such operation is done the fewer will be the complications, and all the dangers attending operation will be diminished or avoided. There will be a shorter anæsthesia, shorter operation, less handling of the parts, less shock—surgical and dynamic—and quicker convalescence. There will be less need of drainage, because of the fewer complications. In complicated cases with adhesions, and where fringes of cicatricial tissue are necessarily left, the value of drainage is to be insisted upon. Cases do the better for it, have a more uninterrupted convalescence, and are more comfortable generally than where it is omitted. The *drainage tube* should be kept clear and clean, emptied frequently, and removed when the discharge is serum.

From my own experience, I must regard the disfavor which certain operators express concerning the tube as the result of ignorance of its proper handling, or of those cases that require it. To its use I certainly ascribe the recovery of many cases that would otherwise have been failures.

As to the *details af all operations*, they should be as exact and simple as possible. All sponges and instruments should be counted before and after operation. No hand except those of the operator, assistant and nurse should approach the trays or touch an instrument under any circumstances whatever. The incision should be closed accurately and firmly without being strangulated by the ligatures. Care should be taken that the skin-edges

do not invert, and thus prevent union. Before opening the peritoneum, all hæmorrhage should be checked by pressure forceps, and when once the peritoneal cavity is reached, the work should be as quickly and expeditiously done as is consistent with thoroughness. No operation should be undertaken without full preparation for any possible complication. In ligaturing the pedicle in ovariotomy, the double surgeon's knot is by all odds to be preferred to any other. It gives greater certainty of constant pressure, and carries with it less danger of slipping, as I can readily demonstrate.

The *after-treatment* of these cases is marked by no special features, except to insist on absolute abstinence from food or drink until the stomach is entirely settled. Then liquid diet is begun in small quantities, butter-milk being an excellent *initiative.* If there are signs of tympany, a saline purgative will usually afford prompt relief; or, if this is not well borne, small doses of calomel will have the same effect in relieving the distension.

As a preparatory treatment for the operation, I insist upon rest in bed for at least twenty-four hours, and free purgation. When this is done, there is much less danger of tympany subsequent to operation. The patient should remain in bed for at least three weeks, and should wear a bandage for at least a year. This will obviate, in most cases, the complication of hernia.

A word as to the *electrical treatment of pelvic diseases in women.* To those who have followed out the claims of the electricians, it will be evident that many of their cures depend entirely upon the correctness of their diagnosis. When we consider the absolute impossibility of making an exact diagnosis in the pelvis or abdomen, we are justified, in the light of exact surgical experience and of our own failure, to doubt the perfection attained by these men, the most of whom have never seen inside of an abdomen. If we doubt their diagnosis, what, then, must we say of their cures?

A wide field of discussion is still left open in reference to the surgical affections of the spleen, liver, and kidneys, and also of the gall bladder.

Generally, the same teaching and arguments apply to these as to the operations already considered. Where they are divergent, it is due to the anatomical relations of the parts, the same general principles underlying all.