

THE ESSENTIALS OF SUCCESS IN VAGINAL HYSTERECTOMY.

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The experience of gynecologists is gradually establishing the fact that the removal of the uterus through the vagina is not in itself a very dangerous operation. Of course there is a mortality connected with all operations involving any considerable amount of cutting, but there is nothing about the one under consideration involving any special, unavoidable danger. What there is comes not so much from the danger of the operation as from certain avoidable circumstances which may be considered under three heads, viz: 1. Unsuitable cases for operations; 2. Imperfection in the technique; 3. Mistakes in the after-treatment.

It would be absurd to maintain that unfavorable circumstances can always be avoided in practice, yet there is much to be accomplished in that direction, and a great majority of the deaths due to the operation ought not to occur.

1. *Unsuitable Cases for Operation.*—Unfortunately, the great majority of cases are unsuitable ones—they are usually neglected cases of malignant disease that come to us too late. Sometimes the patient does not apply soon enough for treatment; at other times the physician does not promptly recognize the nature of the trouble. The parts about the uterus are infected, the patient has septicemia, is anemic, or perhaps has some kidney or heart complication;

or she may be too old, and yet pleads to be given her only chance for recovery.

It is our duty to examine carefully as to these conditions and select our cases more carefully. In the majority that come up for operation the malignant disease has so far advanced that we are quite certain that it will return, and in that case we should not operate except under the most favorable circumstances, lest we hasten death. Yet such is done every day. When there is great probability of a cure by operation, there is seldom septicemia nor profound anemia; and any kidney or heart trouble can be rendered much less harmful by preparatory treatment, and thus favorable conditions be obtained. A large proportion of the present mortality will be obviated when it comes to be recognized by the general practitioner that hysterectomy is for the early or simple cases instead of those already far advanced. Cases are being constantly sent to the gynecologist for a hysterectomy in which the entire pelvic cavity is infiltrated, and the medical attendant, after dilly-dallying until the fatal die is cast, finally announces that the only hope of a cure lies in a hysterectomy.

2. *Imperfection in the Technique, and (3) Mistakes in the After-treatment.*—Given a proper case for hysterectomy, a fatal result is due almost always to errors in the technique. So many methods have been described, and so many different maneuvers recommended that the beginner is almost necessarily at sea and is sure to employ some plausible but disastrous modifications and innovations, with a result that adds immensely to his unenviable experience. I have found that it is not the particular method employed that influences the results, except in one way, viz: in employing methods and maneuvers to suit the particular case.

I have used ligatures exclusively twenty-four times with one death; the forceps exclusively in nine cases with no death; both forceps and ligatures on the stumps in seven cases with no death; forceps to stumps and catgut to vagina and connective tissue in four cases with no death; and ligatures to stumps and forceps to vagina and connective tissue in one case with recovery. I have usually separated the bladder before making my posterior incision, but sometimes have opened the peritoneal cavity behind first. I have usually ligated or clamped from below up, but have sometimes retroverted the uterus and put on forceps from the peritoneal end of the broad ligament. I have a few times cut away portions of the cervical end of the uterus, other times I have bisected the organ. I have sometimes ligatured the vagina the first thing, at other times the last thing—at other times put forceps to its edges, and at other times have let it alone. The great thing is to see what is to be done and no more, and to do the thing required and only that.

First of all we must secure against hemorrhage. When the vagina is of fair size and the cervix can be pulled down, ligatures are best because we can take a proper amount of tissue, tie it firmly and safely, and have nothing in the way to prevent us from tying the next section of the broad ligament securely, and finally have plenty of free room for ligaturing or pinching arteries in the vagina or connective tissue, or of sewing up the edges. Many a woman, however, has lost her life because the surgeon could not or else did not take time or pains to tie securely. Yet he ought always to feel when he is

through that the patient is not in the least danger of bleeding to death. Forceps are less desirable, because after the first one is put on it is in the way and hampers all subsequent maneuvers, because he can not always be sure that some tissue may not slip out of them, or that some old instrument, or some untried one, may not bend, break, unclasp, cut the tissue or press injuriously upon some viscus. An abundance of tissue should always be left on the uterine side of the forceps to prevent slipping, for it will all slough off at the blades, and the operation be just as thorough as if we did not leave so much tissue.

In case, however, the vagina be narrow, or the cervix can not be pulled down, or the connective tissue be too greatly thickened and altered by old inflammatory action, the surgeon should not employ the ligature, because he can not be sure of tying tightly and securely. He should then ligature such tissue about the cervix as he can ligature well, and put forceps on the rest, or should use forceps exclusively. He can usually place a forceps as far as the finger can reach, or he can place a forceps on the base of either broad ligament, cut off the intervening part of the uterus, pull the rest down a little, and place forceps higher up, cut away some more and so on (*morcellement*). It is a great mistake to attempt to include too much tissue in one pair of forceps. If we include the whole of the broad ligament the base, being thicker, will be well compressed, while the thinner upper portion may slip out and bleed. It is better to put a pair on the cervical portion or base and another on the upper portion on either side. There is a tendency to use forceps too long and slim. They should be short and thick that they may not spring at the end, or project too far out of the vulva and strike the pillow placed under the patient's knees. There are large arteries in the sacro-uterine ligaments that are sometimes not included in the first row of ligatures or clamps. These should always be sought for before the operation is finished. In seeking for these bleeding vessels without knowing where to seek them, it has happened that the upper ligatures or forceps have been loosened by rough handling.

The next thing to do is to take the proper care of the peritoneum. Imperfection of technique in this respect is the cause of the many deaths from peritonitis, ileus and septicemia that have occurred. While ligaturing requires the most operative skill, the management of the peritoneum requires the greatest judgment. If the intestines have been properly prepared by purging, dieting and intestinal antiseptics, there will be but little trouble in avoiding interference with them during the removal of the uterus. When the uterus is taken away there is a gap in the peritoneal cavity between the stumps, into which a knuckle of intestine is apt to fall. It is the management of this intestine and the gap under it that requires the use of sound judgment, for the advice given by different operators as found in the literature is contradictory.

In the first place we must remember that the stumps will slough, or at least the ligatures will become infected. Hence, one great problem is to prevent infection of the peritoneal cavity and septic peritonitis. To do this we must remove all debris from the pelvic peritoneal cavity, first with the sponge and, if we have operated upon a septic uterus, next by washing it out with a stream of sterilized

water. If we leave debris there infection will follow as surely as the night will follow the day, for inside of forty-eight hours the contiguous stumps will stink. Having cleaned the pelvis we must prevent the adhesion of an intestine between the stumps with its accompanying danger of ileus and septic peritonitis. There are several means of doing this. The first and most important is to draw forward the omentum if, as is often the case, it has not presented itself, and place it under the intestine so as to contract the adhesions with the stump or peritoneal edges and thus leave the intestine free. If we have used ligatures on the stumps we can draw the stumps together, not pulling on the ligatures, below the omentum and sew them together, thus fixing them extraperitoneally. If practicable it adds to the safety of the patient to catch the anterior and posterior cut edges of the peritoneum and stitch them to their respective anterior and posterior vaginal edges and thus close the raw connective tissue surface, or stitch them to the united stumps, leaving an opening on either side to drain the peritoneal side of the stumps. If we have used forceps we can not approximate the stumps accurately, but can put the omentum between their upper ends. Nor can we sew the peritoneal edges to the vaginal edges. In fact, the presence of the forceps prevents us from doing any satisfactory sewing. We will have to depend upon the shielding omentum or upon a gauze tampon to hold up the intestines. And it is just here that a serious mistake is many times made; and that is to place the tampon high up among the intestines in order to hold them away from the stumps and drain the peritoneal cavity. Those who do thus forget two things, viz: that the peritoneal cavity above does not want draining but merely wants to be let alone, and that the gauze that drains the peritoneal cavity will irritate it and infect it, because infection exists in the contiguous necrotic or ulcerating stumps. The conditions would be different could we depend upon keeping the stumps aseptic. Besides, when we remove the gauze we have a foul cavity whose walls are partly formed of intestines. There is also danger of paralysis of the adherent intestines with serious results, or of ileus from a kink of compressed and adherent intestine. I believe that the vagina should always be tamponed with iodoform gauze, but in case the peritoneum can not be shut off above, the tampon should be against omentum above, and should only be put high enough to drain the stumps, and never project above them. In case there be raw tissue in the pelvic peritoneal cavity the gauze may project only far enough backward to drain these, and should be against the very bottom of the pelvic cavity and not project upwards. The less gauze that extends beyond the peritoneal edges, providing it drains the raw surfaces, the better. Drain adequately what needs drainage, but do not drain a bit more. When the gauze is removed it will usually be necessary to douche the vagina with antiseptic solutions. If the gauze has reached the intestines there will be danger of the solution breaking through the adhesions into the peritoneal cavity, as I have known to occur in two instances, happily not in my own cases, with fatal results. The adhesions, although firm in character, are sometimes not extensive enough to stand the pressure. If the gauze has not been placed too high it can remain from four to five days without causing irritation or any rise in temperature. I find that I have less temperature by

leaving the tampon for at least four days. The first douche should not be given until six or eight hours after the gauze has been removed, in order to allow the parts to contract, and there should be a plain douche, given without force and with a return tube placed beside the syringe point. After that, weak antiseptic solutions should be used every eight or twelve hours without the return tube. The patient should, if possible, be kept on her back for forty-eight hours or until the omentum has become adherent over the peritoneal opening or wound.

All of these particulars may not seem important, but if carried out will be followed by a recovery without tympanitis, without abdominal tenderness, without high temperature and, I am almost tempted to say, without danger.

I have adhered to them in thirty-seven cases, being careful to omit no detail that would add only a little to the security of the patient, and have had the good fortune to lose only one patient from the operation, although I am sorry to say that, owing to the advanced stage of disease, a large proportion of the cases of malignant disease of the cervix have died later of a recurrence. Nearly all cases of malignant disease of the uterine cavity have remained well.

To recapitulate:

1. Operate only on cases in which we can operate in healthy tissue.
2. Use the method and maneuvers adapted to each individual case—not adhering rigidly to any one for all cases.
3. Ligature enables us to do a more complete operation than forceps, but forceps should be used when ligatures can not be applied with accuracy.
4. When possible, place omentum between the intestines and the stumps.
5. Draw the ligatured stumps together, and attach the peritoneal edges either to the vaginal edges or to each other.
6. Pack iodoform between the blades of the forceps, but do not allow the packing to project upward between the intestines.
7. Leave the packing for four days as a rule.
8. Begin douches about eight hours after the packing is removed and use a return tube the first time.
9. Keep the patient on the back for forty-eight hours.

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