REMARKS ON THE TECHNIQUE OF VAGINAL HYSTERECTOMY.

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VAGINAL hysterectomy, whether done for cancer or any other reason, is not so familiar to the American gynecologist as it is to his German confrère. It is an operation done in the depth of the vagina, and naturally much more difficult than any other one performed on the outside of the genital organs. The possibility of removing the uterus from the floor of the pelvis has been established by experiment, and the feasibility of performing the operation on the living has been so often demonstrated, and with such favorable results, that there can be no doubt that this operation belongs to the legitimate procedures in gynecology. When I said, in my paper read before the Washington Congress, that vaginal hysterectomy has proved to be an operation possibly allowed to every gynecologist, and not only to the experienced, high-standing leaders in the profession, I meant to add that this remark was not intended to include every general practitioner and amateur gynecologist. It requires a certain amount of experience to manipulate in the depth of the vagina, some knowledge of the anatomy of the parts, and surgical dexterity. In Germany, we are accustomed to apply the title of gynecologist to those who have passed a clinical school, attached as assistant to a university or similar institution, and the number of self-made and self-taught men is decreasing in accordance with the development of this branch of medicine.

Even when only legitimate gynecologists begin to undertake vaginal hysterectomy, they cannot neglect the acquisition of individual experience, and often must pay dearly for their skill. In order to facilitate matters to those who still lack the necessary experience, I wish to make the following remarks.

It is of no special importance on which side of the uterus the detachment of the cervix from the fornix vaginæ is begun. We can open the floor of the pelvis from the sides, in front or

behind, and can safely reach the peritoneum and detach the cervix. At all events, the operation should be undertaken only when the uterus is freely movable so as to allow stretching of the field of denudation. I myself prefer to open the posterior fornix, because at this point we generally reach the peritoneum at an earlier time, and I feel very easy as soon as I can introduce my finger into the peritoneal cavity and control by this means all further steps. I unite the vagina to the peritoneum by sutures introduced at some distance from the edge of the wound surface, thus controlling the bleeding as well as the gaping of the lymph spaces of the pelvis. Through this opening I perform the preliminary ligation of the pelvic floor on both sides, as may be seen in my book on the "Pathology and Therapeutics of the Diseases of Women," 1887.

The detachment of the lateral fornix must reach the side of the body of the uterus; the cervix must be thoroughly freed. I generally finish one side before I proceed with the other.

When the cervix has been freed from behind and both sides in this manner, I enter on the detachment of the bladder. This step has been judged very differently by various surgeons. Even after having done the operation two hundred times, I never feel quite free from embarrassment at this point of the procedure. I join the edges of the lateral wound by a horizontal incision which follows the line of detachment of the anterior fornix to the cervix. The vagina is cut through at this place; the detachment of the bladder is effected with the fingers. The extent of the connection between bladder and cervix varies remarkably. Sometimes we see the peritoneum of the anterior cul-de-sac coming down to it within half an inch; in other instances it reaches only up to half the height of the body of the uterus. This fact shows that a great amount of care is required in the detachment of the bladder. In proceeding as shown, I have not injured this viscus except in two cases during the summer of 1887. In these cases the neoplasm had infected the posterior wall of the bladder, and in endeavoring to remove all the diseased tissue I removed also a part of this wall. Other operators report having cut into the bladder or opened the ureters. I have observed only one instance of accidental needle puncture, and the patient in this case never suffered any inconvenience. In the two cases mentioned

above, the bladder had a free opening. This opening, lying between the organ and the place formerly occupied by the cervix, could not be called a vesico-vaginal or vesico-uterine fistula; it formed a kind of vesico-peritoneal communication. In my first instance of this kind, the uterus had been enlarged to the size at the fourth month of pregnancy, and the connection between bladder and uterus was quite extensive. The opening into the bladder, nevertheless, was reduced, even during the operation, by the natural contraction of the parts, which is remarkable in every case as soon as the uterus is removed. As the operation had been difficult, I did not wish to prolong it by the suture of the bladder, and therefore introduced a drainage tube, as I usually do, insuring the free escape of the urine, and had the patient brought to bed. The recovery was the most astonishing point: the patient, who was very anemic from profuse hemorrhages and sufferings, recovered, although she continued vomiting for eight days. The urine never troubled her. I removed the drainage tube on the twenty-first day, when the patient was out of bed. Some time before this, she reported that she could retain some urine for half an hour. A week later, she retained urine for nearly two hours, and lost control over the bladder only in the case of certain motions and positions. The patient left my house eight weeks after the operation, having extraordinary control over the bladder, and declined to have any further local treatment, although there was still a small opening in the cicatrix of the fornix, through which, by pressing, a small amount of urine escaped. The operation was done towards the end of June, 1887, and I hope that the definite closure of the bladder will be effected by cicatricial contraction.

The other case was operated on during the first days of August of the present year. The opening into the bladder had the same position as in the preceding case; but as the patient was not so weak and anemic, I at once united the edges of the bladder and the border of the peritoneum to the vaginal fornix. This was healed when the patient left my house, three weeks after the operation; although the patient complained still of some discomfort in the bladder, which could retain only a small amount of urine, some tenesmus being felt whenever a larger quantity accumulated. The ureters I never saw in my operations; they enter the bladder so close to the pubic arch

and far from the cervix that they can hardly be injured when we free the cervix at its attachment to the pelvic floor.

The final removal of the uterus is performed by some operators after the fundus uteri has been everted; by others, without eversion. If the uterus is not very large and can be brought out easily, I do not evert it. If it is large, I evert it through the posterior opening; others prefer the anterior opening. This step of the operation sometimes causes great difficulty, and I have devised an instrument for everting the uterus from within; for a long time past I have ceased using this instrument and succeed in everting the organ with Muzeux's or the bullet forceps, which latter I chiefly rely on. I push the cervix forward and upward, expand the posterior hollow of the fornix with a plain, flat hook, and catch the posterior surface of the body; this is brought down, and as fast as the posterior surface comes into view, other forceps are inserted until the fundus passes the hollow.

Then the Fallopian tubes and upper parts of the broad ligaments come into view. It is very important, if possible, to remove the whole tubes with the ovaries. In order to accomplish this, the everted uterus must be pushed aside; with the finger I catch the ovary and the tube, thus stretching the lateral part of the broad ligament, and into this the ligatures are inserted. I try to attach with these same ligatures the rest of the ligament to the vaginal fornix. When the ligament is thoroughly transfixed, I detach the uterus, tube, and ovary of that side; the same is done on the other side.

If there is any bleeding, I catch the arteries in question with the forceps and ligate them; or I ligate the whole surrounding tissue. I always try to attach these bleeding surfaces to the edge of the vagina. Frequently I am asked if the intestines do not prolapse during the operation. This happens but very rarely, and if it does occur, I introduce a sponge on a holder, thus retaining the intestines in Douglas' pouch. Perhaps the reason why intestinal prolapse happens to me so seldom is that I exert no pressure from above.

The opening in the floor of the pelvis is diminished at once, so that, when the edges of the wound are tied, it is frequently difficult to find it. Should the opening remain large—an unusual occurrence—it can be reduced in size by uniting the edges of the vagina.

Some operators close this wound at once. I cannot make up my mind to do so, since I continue using the drainage tube in these cases. I apply a smooth india-rubber tube, the end of which must lie in Douglas' pouch. This tube is retained by the contraction of the edges of the opening, and I have never seen any discomfort arising from its presence. There is always some oozing of bloody secretion during the first days, and only when this is diminishing I remove the tube, generally about the seventh or eighth day after the operation. To guard against infection of the peritoneum, the outer end of the tube is surrounded with salicylated cotton. As regards after-treatment, it must be entirely expectant. If the patients cannot pass urine freely and spontaneously, it is drawn by catheter as long as necessary; generally the patients pass water from the first day without discomfort.

I avoid vaginal injections unless there are decomposed discharges. The washing out of the peritoneum seems of doubtful effect; I have not done it for a long time.

The bowels are moved on the fourth or fifth day. The patients are allowed to get up between the tenth and twelfth days. I generally do not inspect the cicatrix before the fourteenth day.

I have never seen an opening into the peritoneum; it had always closed. I begin to remove the sutures about the fourteenth day, at intervals of two or three days.

The cicatrix forms a short, tense line, towards which the fornix of the vagina contracts concentrically.

The general nourishment is arranged according to the course of the convalescence; as soon as the patients are out of bed and feel stronger, it must be remembered that they are entering on the climacteric period, and that congestions and similar troubles are to be expected. I therefore order early exercise, fresh air, and appropriate diet. Sexual intercourse should not be allowed before the end of three months.