FAILURES AFTER OPERATIONS FOR PROCIDENTIA UTERI*

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DISAPPOINTMENT befalls the patient and humiliation is the surgeon's lot when the birth canal falls down again after an operation for prolapse.

Te Linde[1] of Johns Hopkins Hospital frankly states that "in 30% of the vaginal hysterectomies the ultimate anatomical results were not good". His standard of perfection must be high. Campbell[2] claims that the incidence of enterocele after vaginal hysterectomy is approximately 2%. As is the case with hernia elsewhere, there is wide divergence in the published recurrence rates. Following 85 vaginal hysterectomies for prolapse I have had 5 prolapses of the vagina severe enough to require further treatment—a recurrence rate of 6%. However, not all our prolapses have been treated by vaginal hysterectomy. The Fothergill operation in moderate cases, Kocher's ventral implantation (done under local) in the very aged, fascial suspension of the vagina,[3] vaginal trachelectomy for prolapse of the residual cervix, and lastly, the Le Fort procedure, have all been employed in small series. The recurrences in this group will be discussed later.

It might not be amiss to try to find the reasons for our failures, to study their anatomy, and to discuss their further treatment.

CAUSES OF RECURRENCE

The delay factor.—Both patient and physician delay may occur in prolapse cases. The pessary as a method of treatment is responsible for much physician delay. Cases frequently come for curative treatment after wearing for many years a large ring which has stretched the vagina to almost the size of a bologna sausage, and has atrophied the perineal structures until there is almost no support left. This prejudices the surgical result.

A patient with an enterocele following a vaginal hysterectomy gave a history of having worn a ring for eight years before her operation.

A bad result in a community is a deterrent to surgical treatment. "Mother is worse off than she was before" is powerful propaganda.

The frequent unnecessary closure of the vagina by a Le Fort procedure is, in the writer's opinion, another inhibitory factor.

Nutritional factors.—I have long been convinced that malnutrition is a factor in many prolapses. According to Bayan,[4] malnutrition was a factor in the tenfold increase in prolapse in the Philippines, seen after the war. My late chief, Dr. Stuart Evans, used to frequently state that many Canadian families get little fresh food after the garden dies down in the fall. How often one sees patients who eat no citrus fruits, do not like eggs, just take a little milk in their tea, etc.

Obesity is an element in the malnutrition factor.

One of my cases had a good result for seven years following vaginal hysterectomy. She then put on 37 pounds, mainly in the abdomen. The pressure forced the vagina down and out.

We prefer not to operate on prolapse cases if they are obese, and sometimes hold them on a reducing diet for months. We have found dexedrine helpful at times. Some cases are definitely hypothyroid and require desiccated thyroid.

Inadequate primary surgery.—Ventral suspension, when done for moderate prolapse, fails to cure and only embarrasses the surgeon when effective curative surgery is finally undertaken. On one occasion I had to pause during a vaginal hysterectomy and go up into the abdomen to cut down an unyielding suspension. Overzealous conservatism in advanced cases, in order to preserve child-bearing function, may result in failure.

A young woman with her cervix at the outlet greatly desired another child. Vaginal hysterectomy was indicated. Influenced by friendship, the writer did a Curtis advancement operation (a modified Fothergill with retention of the cervix—applicable to a less advanced case). She became pregnant, the cervix reappeared, she lost her baby by a premature labour, and finally had the vaginal hysterectomy which was originally indicated.

Post-hysterectomy prolapse is best prevented at the original hysterectomy. Some degree of prolapse commonly exists in multiparous women requiring abdominal hysterectomy. We make it a rule to suture the uterosacral ligaments to the pubocervical fascia after closure of the vaginal vault. We do this by threading needles on each end of the traction stitch commonly inserted below the cervix in the pubocervical fascia, before opening the vagina. Each end is passed through the corresponding

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uterosacral ligament from inside out, and tied. This draws the pubocervical fascia back over the vaginal vault and re-establishes the antero-posterior sling of the pelvic floor. In addition, we draw the uterosacrals together with another stitch or two to obliterate the fossa behind the cervix — the starting point of enterocele. When the cul-de-sac is deep, we sometimes put a few purse-strings in its bottom as suggested by Te Linde. In doing total abdominal hysterectomy where there is advanced procidentia we do a fascial suspension of the vagina,[3] preferably with a strip of fascia lata.

In doing the perineal repair, we prefer to err, if at all, on the side of snugness, and, if necessary, lend our patients a set of graduated glass dilators to use postoperatively.

Previous to discharge, in addition to general instructions re convalescence, we warn the patient to maintain as trim a figure as she did in her high school days, lest intra-abdominal pressure from fat force her vagina down. Being thus alerted to the possibility of recurrence, should she develop one, she is less likely to blame the surgeon, and her husband is not so likely to be as resentful as the man who assumes his wife's operation for prolapse to be as final as an appendectomy.

THE ANATOMY OF RECURRENCE

A slight general relaxation of the birth canal and its adjacent structures is not infrequently seen after operations for prolapse. This is usually symptomless.

Prolapse of the vagina, sometimes called "enterocele" because it contains small bowel, is the common form of recurrence after vaginal hysterectomy. It begins as an exaggeration of the fossa behind the cervix and between the anterior ends of the uterosacral ligaments. A small symptomless enterocele the size of a crab apple may sometimes be seen bulging from the upper end of the posterior vaginal wall after abdominal hysterectomy, if special attention is not paid to the uterosacral ligaments. It is not *primarily* a descent of the vaginal vault or the bottom of the cul-de-sac. The latter lies in the lee of the sacrum. A more developed enterocele, still intravaginal, will hang down from the upper posterior vaginal wall like a sausage. The patient is now aware of its presence. Later it will drag down the vaginal vault and the rectovaginal septum, and protrude like the rounded end of a large test tube with the prolapsed bladder in front.

The prolapsed Watkins interposition will be described later with its operative correction.

TREATMENT OF RECURRENCES

The treatment is surgical. In the last ten years we have refused operation but once. The patient was an elderly cardiac in fibrillation. She will not have long to wear her pessary. The choice of operation is influenced by the

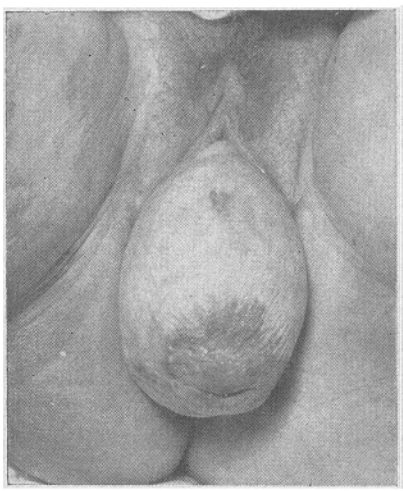

Fig. 1

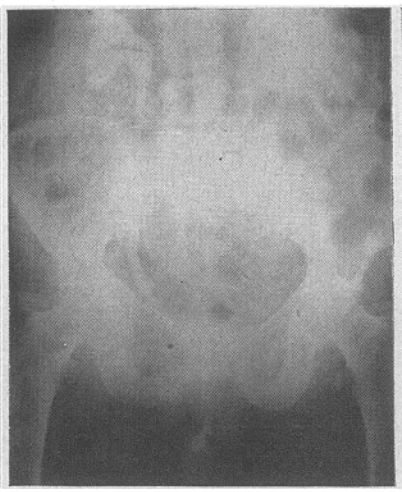

Fig. 2

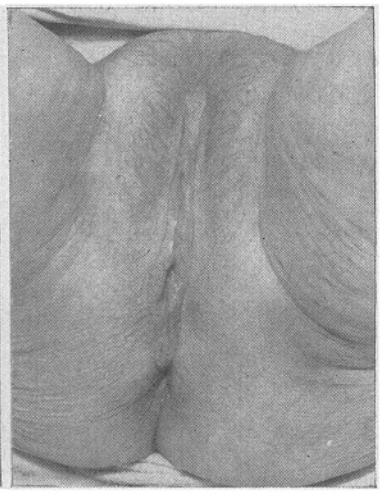

Fig. 3

Fig. 1.—Long standing procidentia in a 71 year old woman—supravaginal hysterectomy 20 years ago. The prolapse was held up preoperatively with a cup and stem, and perineal exercises used. **Fig. 2.**—Intravenous urogram on same patient—showing urinary tract dilatation due to kinking of ureter by downward drag of uterine arteries. Patient originally admitted to urological service with backache, fever, hæmaturia, and pyuria—courtesy Dr. Eric Nichol. **Fig. 3.**—Photo taken before discharge from gynæcological service, after a vaginal trachelectomy with preservation of the vagina—some œdema still present.

rating of the patient as a surgical risk. Family questions as to the risk involved may be answered optimistically. There has been no mortality, in our experience, in cases operated on by the vaginal route. The one death associated with the surgery of prolapse occurred following abdominal operation.

A uterus like a large knobby potato was presenting at the vulva. Total abdominal hysterectomy was performed and the prolapsed vagina held up with strips of external oblique fascia. The anatomical result was good and the relatives were assured that no clouds could be seen in the sky. By the third day, the patient was distended and vomiting, with a rapid pulse. X-ray showed shadows at the lung bases. Dr. Elmer Plunkett suggested atelectasis from distension, due to peritonitis. As the appendix had not been removed this seemed unlikely to the operator. "What about diverticulitis?" enquired Dr. Plunkett. Post mortem examination revealed peritonitis and diverticulitis of the sigmoid. We concluded that an unsuspected diverticulitis had been flared up by packing off the sigmoid. Since then we insert a rectal tube at the time the patient is catheterized to deflate a possibly distended sigmoid, and employ as high a Trendelenburg posture as possible, to clear the pelvis of bowel and reduce the amount of packing necessary.

Preoperative preparation.—It is advisable to explain to the patient that another type of operation is indicated, and that the chances of cure are excellent.

We invariably take a ring away from patients awaiting operation and if the prolapse is extruded we use the old-fashioned cup and stem pessary with its belt and small tubing slings. This lifts the prolapse off the perineum. We then put the patient on perineal exercises. She is instructed to contract the vaginal outlet (or lift the anus) many times during the day. An outlet as toneless as a cadaver and as wide open as an army bugle will in a few weeks develop so much tone as to be almost normal in appearance. One such patient, whose prolapsed vagina had been hanging out for months, after a few weeks of such preoperative treatment, had the greatest difficulty in forcing her vagina out for a student demonstration. This preparatory procedure gives the operator good perineal tissue with which to build a support that will last.

We also check the patient's diet. When Ebbs and others[5] brought out their epochal diet for maternity cases, we at once applied it to gynæcology. The waiting for hospital beds of recent years has given us abundant opportunity to judge its efficacy. We will never forget the first patient on whom we tried it—a pale, tired, lifeless woman with fissures at the corners of her mouth, and a prolapse. After a month, with her glaring dietary deficiencies corrected with milk, eggs, oranges, wheat germ, and some iron, she whisked into the waiting room — a vivacious creature that we would not have known had we not expected her. She did not require transfusion and her prolapse has not recurred.

OPERATIVE TREATMENT

Every effort should be made to conserve the vagina, for psychic if for no other reason. The surgeon is often surprised, however, by the elderly gentleman who enquires about the future of marital relations.

Enterocele.—An intravaginal enterocele may be tackled from below and the sac removed. I have found it difficult, however, to be certain of the uterosacrals for sewing together to close the gap.

An intravaginal enterocele was exposed from above with the patient in high Trendelenburg posture. It inverted and projected across the pelvic inlet like an inflated finger cot, arising from the retrocervical area immediately below the sutured vaginal vault and far above the bottom of the cul-de-sac. It was sutured to the rectus fascia (Brady's technique).

Complete inversions of the vagina have been successfully sewn to the rectus fascia by the same method. In cases of submaximal vaginal prolapse where the highest point of the enterocele cannot be pushed up with a large Hegar dilator or a Van Lackum vesicle stripper high enough to suture to the rectus fascia, we have suspended the highest part of the vagina with a strip of fascia. It is essential to suspend the *apex* of the pushed-up enterocele.

Two years following a vaginal hysterectomy a woman came back with an enterocele. It was not lax enough to be pushed up to the abdominal wall so we turned down fascial strips. The peritoneum was transversely cut behind the bladder and pushed forward to expose the anatomical vaginal vault, to which the fascia was sutured. In five months the patient was back with her enterocele although the vaginal vault was holding up. We had erred in suspending the anatomical vaginal vault rather than the apex of the enterocele which lay posterior to it. We learned another point from this case. The vaginal vault was holding up although a fascial strip could be palpated on one side only. Since then we have employed an unbroken sling of fascia lata wherever possible.

Watkins' interposition. — The most difficult case ever presented to the writer was a prolapsed Watkins' interposition. The whole uterus lay outside the body and as the fundus had broken loose and been pushed back and down, the uterus appeared like a pear with the bulbous end toward the anus and the small end directed toward the symphysis. Ten cubic centimetres of 1% methylene blue were left in

the bladder after catheterization. In attempting separation of the bladder above the cervix in the usual way, the field was soon flooded with blue. With Te Linde's *Gynæcology,* open at the picture of a Watkins' interposition, beside the operator, the pouch of Douglas was then entered and the fundus held up with a tenaculum. It was possible to get a plane of cleavage at the vesico-uterine fold, and working up behind the uterus the bladder was separated by gauze and sharp dissection. Vaginal hysterectomy was performed. This experience confirmed my unfavourable opinion of an operation which places an organ so prone to disease, in such an inaccessible position. Edwards and Beebe[6] reporting a large series of vaginal hysterectomies claim that "previous transposition operations (Watkins) almost as a rule, result in difficult and tedious surgery".

The Le Fort operation.—This operation is commonly used for recurrent prolapse. I have resorted to it on but two occasions. One was an elderly widow with angina; the other was for an enterocele, previously described, which had recurred after two previous operations. The latter patient has been taking vitamin E for whatever benefit it may be to her connective tissue.[7]

Summary

The writer reviews his own failures after operations for prolapsus uteri, and those of others who have come to him.

A successful outcome in the surgery of prolapse is favoured by, (1) Early surgical treatment. Many years of wearing pessaries which distend the vagina and press on the perineum weaken the tissues and prejudice the result. (2) Adequate preoperative preparation directed to proper nutrition of the tissues, relieving the perineum of all pressure, and rehabilitation of the perineal muscles by exercise. (3) An adequate primary operative procedure with special attention to prevention of "enterocele" by approximation of the uterosacral ligaments behind their cervical attachments. (4) Avoidance of obesity, while maintaining good nutrition.

Recurrences should be treated by a procedure which, if possible, conserves the vagina. Fascial suspension of the vagina has now been employed by the writer in sixteen cases, with one death from diverticulitis, one partial failure, and good results in fourteen cases. The Le Fort operation which disregards sex consciousness and marital relations should be regarded as a last resort.

With modern surgical treatment, the prognosis for a recurrent prolapse is excellent.

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