SURGERY, GYNECOLOGY, OBSTETRICS AND GENITO-URINARY DISEASES

END RESULTS OF ROUND LIGAMENT FIXATION.*

By W. KOHLMAN, M.D.,
New Orleans, La.

Retroflexio mobilis may exist in a large number of cases without giving rise to any symptoms. Some gynaecologists do not believe that the displacement causes any disturbance and consider the symptoms, which may be present, due to a complicating peritoneal irritation; others are of the opinion that the displacement is the prime factor in the development of symptoms. The majority consider treatment advisable:

1. If symptoms are present which must be considered due to the position of the uterus,

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as pain, hemorrhage, sterility, reflex irritations, etc.

2. If symptoms are present which are increased by this position, or if pathological conditions are found which are not benefited by treatment, as, for instance, a chronic metritis that does not yield to proper treatment on account of a coexisting retroflexion.

In such otherwise uncomplicated cases the Alexander-Adams shortening of the round ligaments with opening of the peritoneal fold has given good results in the hands of many operators, and preserves the physiological mobility of the uterus more than any other operation.

In recent years methods of shortening the round ligaments by intraperitoneal surgery have been preferred.

If there is the slightest doubt in regard to the mobility of the uterus an abdominal operation is absolutely indicated.

Fig. 1—Left round ligament being drawn through artificial opening of peritoneum. (Liepman.)

Fig. 2—Both ligaments being drawn through artificial opening of the peritoneum. (Liepman.)

The immobility of the uterus may be due to fixation of the body of the uterus, direct fixation, or to adhesions of the adnexa, indirect fixation, or the body of the uterus and adnexa may be held by more or less extensive adhesions.

This complicated dystopia of the uterus is of great clinical importance. The analysis of these cases shows without exception general and local disturbances. But it is often difficult to decide if the symptoms are due to the faulty position itself or to the complicating pelvic peritonitis. That is the reason why the opinions of many operators vary greatly regarding the treatment of these cases.

Some consider the presence of a fixed retroflexion an indication for surgical interference, while others treat such cases, if the symptoms are not very disturbing, only by general medication, or by general medication and local applications.

Surgical treatment is indicated in all such cases not benefited or relieved by general and conservative local treatment. The object of the surgical interference is to free the uterus

from the pathological fixation and accomplish a permanent normal position.

To accomplish this object it is necessary to open the abdomen, to divide the adhesions with either instruments or fingers, depending entirely on the extent or density of the adhesions. Pathological conditions of the adnexa, which are most frequently met with, are to be treated as conservatively as possible.

To hold the uterus in as nearly a normal position of ante flexion as possible the following methods of round ligament fixation have been mainly, though not exclusively, employed in the cases operated by me:

In cases where the round ligaments have been found normal, or nearly so, the Gilliam-Doleris method of fixation was employed with the modification that the ligament was fastened under the fascia: or, in suitable cases, the abdominal operation was, following the suggestion of Rumpf and Palm, finished with an Alexander-Adams fixation. The results of these operations are uniformly satisfactory, especially in regard to position, as in these cases the complicating affections of the adnexa are

Fig. 3—First act of the fixation of the round ligament. (Liepman.)

Fig. 4—Second act of fixation of the round ligament. (Liepman.)

not very marked and the round ligaments are in normal condition.

But in a large number of cases the round ligaments are infiltrated and are not very pliable, a condition preventing their being drawn to the more superficial structures for fixation. This is the class of cases where it is yet possible to make a round ligament fixation following the method of Olshausen; or it is necessary to make a fixation of the uterus itself as described by Leopold, Czerny and Kelly. This ventral fixation ought not to be done where future pregnancy is to be considered, as normal delivery in these cases is practically impossible.

The first mentioned fixation has not given satisfactory results in regard to the permanent position of the uterus; the adhesions following this method are not broad and strong enough as only a small portion of the ligament touches the parietal peritoneum.

During the last six or seven years I have used a modification of this original round ligament fixation of Olshausen's, as recommended and performed by Bumm in 1905, and described by Liepman in 1906. Though the modification is very simple, it gives far better results. It forms a stronger fixation and at the same time insures a normally movable uterus, therefore not interfering with future pregnancy and delivery—a fact of great importance in the majority of these cases.

Olshausen's fixation consists in passing a suture from fascia through muscle, peritoneum and round ligament and then back; this suture is tied between fascia and skin. This procedure only allows therefore a small adhesion where round ligament touches parietal peritoneum. Bumm's modification is done in the following manner: The parietal peritoneum is loosened to the extent of about one inch and drawn towards the middle line. By means of a closed clamp the peritoneum is perforated in the height of the internal ring. The round ligament is drawn through this opening and held there by a suture, which is fastened over the fascia of the rectus.

I have employed this operation since November, 1907. In the summer of 1910 I reported the results of 125 cases before the Orleans Parish Medical Society. The results at that time were very good, though it must be considered that the time of observation was rather short. Of 45 cases examined at that time there was only one recurrence. Up to January 1, 1914, I operated 91 more cases by this method, making a total of 216 cases. On account of the short time of observation I have not included any cases operated during the last year.

I have been able to communicate with and examine 70 of these cases, 60 of whom were found in good condition in regard to the position of the uterus and are free of important symptoms. In 4 cases the uterus was found in retroversion complicated with moderate local symptoms. Six cases have been operated on again, and uterus was found in normal position, the ligaments only slightly elongated; operation was required on account of recurrent disease of the adnexa.

The question which is so important in most of these cases, the question of pregnancy, is a point to which I wish to draw your special attention. Eight of these cases have been pregnant since the operation, two twice, and have passed through a practically normal delivery. The cervix was found in the beginning of labor somewhat drawn to the back but conditions rectified themselves during the progress of labor. In two cases only a low forceps was employed on account of delayed expulsion. Two cases came under my observation quite recently in their eighth month of pregnancy, and so far they have progressed without any pain or discomfort.

Considering that most of these cases had severe pathological conditions complicating the fixed retroflexion at the time of operation, I believe that the results gained by this method have been very favorable, especially in consideration of the fact that in most of these cases a ventral fixation of the uterus would have been necessary.

DISCUSSION.

Dr. F. G. DuBose, Selma, Ala.: Gentlemen, I think all of us appreciate Dr. Kohlman's statistics, and his splendid paper as well. I ask your indulgence for the liberty I take in differing with him with reference to the satisfactory results following fixation of the round ligament into the anterior abdominal wall, which does violence to the normal anatomy, and invites obstruction of the bowel through one of the three openings left after this technique. In those cases of complete prolapse none of the round ligament fixations nor any of the methods of mobile uterine suspension or fixation will suffice. In those conditions of pelvic hernia a V-shaped resection of the uterus and the suturing of the lateral wings over the aponeurosis of the rectus muscle will effect a cure of the prolapse and should be accompanied by repair of the pelvic floor done as a part of the operative plan. It should be remembered that this with all other fixations either of the uterus or the round ligaments substitutes one pathological condition for another. That there is a pull constantly from these adhesions on the parietal peritoneum that gives the patient pain and usually makes her nervous. Any suspension of the uterus through fixation of the round ligaments to the parietal peritoneum, whether it be after the technique of Gilliam as representing the most approved of them all, or by any other method is to be avoided whenever possible, on account of adding to the serious condition of an already severe pathology, the constant traction on the sensitive parietal peritoneum and the train of neurosthenic symptoms that follow this as well as other adhesions within the abdominal cavity. I prefer any of the operations for shortening the round or broad ligaments with the abdomen by plication, especially the one devised by Coffey. By plicating these ligaments normal uterine support is most nearly imitated and are the nearest of present methods to ideal, especially with reference to the freedom from pelvic or abdominal pain subsequent to the operation.

Dr. Edmund J. Horgan, Fairfax, Va.: I wish to make a protest against these operations for the fixation of the round ligaments to the abdominal wall. The anatomical structures are so markedly changed and their relative position is such that it does not seem to me to be a good surgical procedure. Furthermore, there is a dangerous defect which one should always have under consideration, in the Gilliam, Olhausen and Dr. Kohlman's modifications of it, and all operations where the round ligaments are fastened or pass through the peritoneum. Between the two points where the round ligaments are attached to or penetrate the peritoneum of the anterior abdominal wall and from these points to the internal abdominal ring, on each side, openings are left through which a loop of intestine might accidentally pass and become strangulated or adherent. Whether this condition has ever been reported, I do not remember.

The round ligaments should not receive the entire credit for the end results which are obtained when a condition is operated upon which corrects other structures as well. It is a fact, though, that in correcting retrodeviations of the uterus, we often disregard every other structure but the

round ligaments and try to obtain a correction of the entire defect by an operation on them. It is necessary to give the round ligaments a great deal of consideration, but there are two other ligaments so often disregarded, namely, the uterosacral ligaments.

When the utero-sacral ligaments are poorly developed or injured during pregnancy or childbirth, they should be shortened, or there should be a fixation of their musculo-fibrous tissue to the peritoneum on the anterior surface of the sacrum. This will do a great deal to hold the lower segment of the uterus in position, especially when aided by lengthening of the anterior vaginal wall.

Dr. Kohlman, in speaking about his cases of retrodeviation of the uterus, did not bring up the point as to how many were nullipara and how many multipara. In a nullipara the condition could be corrected by the method outlined above. In a multipara, where there is injury to the pelvic or perineal fascia and muscles, in addition to retrodeviation, one would have to do a colpoperineorrhaphy and probably an amputation of the cervix before obtaining a good result from the operating on the round ligament and a permanent good position of the uterus.

Dr. G. C. Rodgers, Elkins, W. Va.: This is a subject that I feel deserves the consideration of every man present who does gynecological work. To the beginner, these operations all look simple and satisfactory, but as the time passes on he finds none of them satisfactory, and the more we study the various suspension and fixation operations, the more we realize that they are theoretically incorrect.

We attempt to correct a pathological condition and in many cases we create pathology but little better than that we have corrected, and so long as we have new ligaments pulling on the parietal peritoneum or that uterus held out of its normal poise, just so long will our patients continue to have trouble and our work fall short of its aim.

While the intra-abdominal shortening of the round ligaments does good in many cases, yet I decidedly prefer the old Alexander operation in connection with an abdominal incision. With this operation after the uterus has been freed (and the pelvic viscera inspected) it can be brought into its normal position and held there, without being abnormally fixed or traction being made in some abnormal direction.

After any of these operations, the pelvic floor should always be inspected and repaired if needed, neither do I mean the ordinary skin puckering operations usually done on the perineum, but each muscle and fascia should be dissected up and carefully united to its fellow of the opposite side.

Dr. H. Stuart McLean, Richmond, Va.: I think in doing these fixation operations we are endeavoring to correct a thing that is often impossible of absolute correction. It is impossible by surgical procedure along these lines to correct immediately or even ultimately a deformity—a pathological deformity which is the result of months and years of stretching and straining and wearing out. I do not believe that there is any ideal operation for restoration of the position of the uterus for the majority of the cases in which we do the operation. I believe the majority of cases in which we are justified in doing such fixation is in

adhesions, where we should fix the uterus for a sufficiently long time to allow the adhesions in the cul-de-sac to heal over. I am very dubious as to the feasibility of these various suspension operations for the correction of displacement. I do them, for I do not know anything better. I always try to fix a good peritoneum, but even then I doubt the ultimate success of my fixation method. My patients are not always well. They have pain and procidentia. It is not the ideal method and there is no ideal way of restoring a condition which is the result of continued stretching and wasting of tissues.

I made up my mind when I heard Dr. Kohlmann's paper, that I would criticize it a little bit, and I continued of that mind until Dr. DuBose spoke. He spoke of multiplication of pathological conditions and areas for affording new adhesions and new pathological development, then he advocated the internal plication method. I have done many secondary operations in patients who have had internal plication methods by other men, because they have adherent viscera at the site of plication. We create multiple points for re-adhesions. I think if Dr. Rogers is correct, there is only one way of restoring the position of the uterus: by taking it along the lines of the normal pull of the round ligaments. If you do it right you will not have strangulation, because you pull it up in such a way that you make the portion of the round ligament fit tightly from its normal to its new point of exit. It is not ideal, but it is as nearly ideal as anything we have.

Dr. Chas. H. Harris, Fort Worth, Texas: There is hardly a section on gynecology where this subject is not brought up. When we stop to think about it, there are a number of things relating to the position of the uterus in which the round ligaments play only a minor part, and any operation creates a new pathological condition, and if we are not in a position to substitute a better one, in many instances we are liable to do great harm.

I think we should first study the mechanical principles underlying the support of the uterus, and if we thoroughly understand these we will find less occasion to open the abdomen for the uteri, that is only possibly tilted back. It is too great a subject to enter into satisfactorily in such few words. One of the overlooked factors is the loss of equal intra-abdominal pressure caused by the falling of the abdominal contents, due to the relaxation of the rectus muscles allowing the viscera to press downward and backward on the uterine body, stretching the round ligaments. No ligamentous operation in these cases will hold this uterus forward. Such cases should have gymnastic exercise and orthopedic advice. It is a big subject and before we open a woman's abdomen to tie up the round ligaments we should be sure we understand the causative factors and that our operative procedure is going to correct them.

Dr. Kohlmann closes: Many papers are written and it is always the same question regarding the ultimate result. This question is to be extensively discussed at the coming International Gynecological Congress to take place in New York next year.

So far as I can see no one method has given uniform satisfaction. The remark of Dr. DuBose

that he would prefer an internal fixation, or something like it, is very correct, and I favor an internal shortening of the round ligament myself. In some cases you can do it, but in these cases I speak of, where you have inflamed parts, you have got to use something to hold the uterus up, otherwise it is going to fall back and get adherent again. It is true that it is only a makeshift to use that little round ligament, at times it is, but after all it is the best that we can get.

He mentioned treatment of procidentia. I have not spoken of that in my paper. I do not make an abdominal operation for complete procidentia. I believe for an abdominal operation of that kind the vaginal operation gives better results and does not disturb the patient as much as the abdominal. Of course you have to do a complete suture of the perineum, which is often more important than the fixation.

Of course there are some cases of strangulated bowel. I operated once myself, and though the patient showed a complete cure so far as the position of the uterus was concerned, she had a pain in her left side which I could not explain by local findings. Later on, on account of excessive hemorrhage, an abdominal operation was necessary, which showed a loop of the small intestine had slipped through a band of adhesions.

I do not believe that I would ever use the uterosacral ligaments. The round ligament is small enough in many cases.

I have not investigated my results in the mobile retroflexion. I merely want to bring to your attention the fixation of the uterus in extreme cases. I always do an Alexander in the mobile variety, because I do not believe I would want to open an abdomen for pain due to a mobile uterus. As most of these patients show nervous symptoms, I generally have them wear a pessary for three or four months, and if they are not then relieved, I advise some surgical means, especially in younger women.

Question: Doctor, what suturing would you use?

Dr. Kohlmann: Chromic catgut. I have never used anything else.

APPENDICITIS—HAS THE LAST WORD BEEN SAID ABOUT IT?*

By W. LOWNDES PEPLE, M.D., F.A.C.S.,
Associate Professor of Clinical Surgery, Medical College of Virginia.
Richmond, Virginia.

There died last year in the registration area of the United States 7,648 people from appendicitis. When it is remembered that less than 65 per cent of our population is under

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