Original Articles.

VENTRO-SUSPENSION OF THE UTERUS.

BY JOHN C. IRISH, M.D., LOWELL, MASS.

THE term "suspension" rather than "fixation" is chosen, because suspension, with considerable mobility of the uterus is to be especially desired.

The manner in which the operation is usually done, gives fixation for a short time after; while the secondary effect is a suspensory ligament which allows considerable motion. Formerly, when fixation was especially aimed at and obtained, the after-results of the operation were much less satisfactory than they are now; so that, in suspension of the uterus most operators at this time employ a technique designed to avoid a permanent fixation, and secure suspension in the ultimate result. Still, in the matter of technique, there are certain details of the operation by which we can save the patient some after-annoyance.

When the organ is suspended by buried silk or silkworm-gut sutures, the latter occasionally make their way out through a suppurating sinus. These extrusions, of the silkworm gut especially, have occupied a very long time. I have had this unpleasant experience in several cases. Therefore, of late I have suspended the uterus with two kangaroo-tendon sutures carried through the abdominal muscles, "fascia" and "peritoneum," thence through the anterior portion of the fundus and through the muscles of the opposite side. I prefer to carry sutures through the anterior rather than the posterior portion of the fundus, believing that when the suspensory ligament has been formed, the uterus may be in a more nearly normal position.

A still more cogent reason for attaching the uterus to the abdominal wall by sutures through the anterior portion of the fundus is brought out by the investigations of Dr. Noble in a communication to the American Gynecological Society, May 27, 1896. Discussing the effect of suspension of the uterus upon pregnancy and labor, after an investigation of 808 cases, Dr. Noble deduced, among others, the following conclusions: "That serious or insuperable obstructions to labor may be produced if the fundus and anterior walls of the uterus are imprisoned below the point of attachment between the uterus and abdominal wall."

This one dystocia of pregnancy and labor due to suspension of the uterus, and the only one his investigations did unquestionably establish, seems really due to the introduction of the sutures upon the posterior surface of the fundus. This condition, as described by Dr. Noble, is due to a tumor at the superior strait, consisting of the imprisoned and hypertrophied fundus and anterior wall of the uterus, constituting a muscular mass, that obstructs the entrance into the pelvis.

I think we may, therefore, reasonably hope that sutures introduced upon the anterior portion of the fundus, may prevent the occurrence of this complication in a following pregnancy and labor. Should this be the case, from the 808 cases investigated by Dr. Noble I think we are fairly justified in concluding that the operation has no objection with reference to a following pregnancy and labor.

In the treatment of retro-displacements of the uterus, ventro-suspension has been so generally resorted to for the past few years, and the results have been so satisfactory, that its employment in these

cases is fast becoming a matter of routine practice. The operation can be very easily and quickly done, and, barring avoidable accidents, without danger to the patient. When we secure suspension rather than fixation, the relief is complete and permanent. The value of the operation in this class of cases is so well established that little remains to be said.

In the treatment of procidentia uteri of every degree, from moderate downward displacement to complete prolapse, the propriety of uterine suspension has not been so generally recognized as in case of retro-displacements. It is in this class of cases, that I wish to especially insist upon the value of this operation. Procidentia, occurring mainly among women of middle age or advanced life, who have borne several children, is very frequently met with. We see only exceptionally, the very aggravated forms of the disease, where the uterus is entirely prolapsed, accompanied by the bladder and a portion of the vagina. More frequently the mouth of the uterus descends to the vulva, and is arrested there. Whether this condition is still further complicated by cystocele depends much upon the condition of the pelvic floor and anterior vagina. The uterus is enlarged and congested, and necessarily retro-displaced. With this condition in these cases anterior and posterior colporrhaphy never cures; and when, in addition, the uterus is curetted and drained, and lacerations of the cervix repaired, if need be, still these multiple operations only partially correct the faulty conditions. It is true, however, they afford great relief—so great that the patients, whose condition has required some of these operations, have believed themselves entirely cured. The relief they experience may to a certain extent be permanent; but the faulty position of the uterus has not been corrected. It is still displaced backward, and is still much too low in the pelvis. Consequently, after a time the uterus descends again to its old position, and again becomes heavy and congested; while, if we have complete prolapse, the failure of all these operations is, as a rule, only more complete and prompt.

This statement of the inefficiency of the above plastic operations for the correction of procidentia uteri, is based largely upon personal experience. But in extension of my apparent lack of skill to obtain perfect and permanent results from these operative proceedings, I must say, that, so far as I have observed the cases of other operators, they have had much the same defective results as have followed in my own cases. While one or more of these operations in the vagina is usually necessary to restore the vaginal outlet or uterus to its normal condition, yet the prime object of our efforts must be to restore and permanently retain the uterus in its original position. This, ventro-suspension does with sufficient precision to make a permanent cure in cases of procidentia of the second degree.

My personal experience in the treatment of prolapse of the uterus by ventral suspension, comprises 21 cases. In 18 there was descent of the organ to the vulva. Three were cases of complete prolapse. Ventral suspension alone was done in the first five cases, with the belief, that when the uterus was held in position, all inconvenience from cystocele and defective perineum would gradually disappear. The after-results in three of these cases corrected that error. In one I have since done anterior colporrhaphy and perineorrhaphy. Two others are still suffering from a cystocele—but

not enough to induce them to have it relieved by operation. There are occasional examples of prolapse of the uterus to the vulva, in which there is no defect of perineum and no cystocele. In the treatment of these, ventro-suspension alone is required. Anterior and posterior colporrhaphy was done in most of the remaining 16 cases. An elongated cervix was amputated in one case. In several instances curetting and drainage of the uterus seemed necessary, and was done in addition to the plastic vaginal operations.

In brief, whatever operations upon vagina or uterus the condition of each patient seemed to require, were done first; then the uterus attached to the abdominal wall at the same sitting.

The after-progress of all these patients to recovery was rapid and uneventful. In no instance were there any of those disturbances that we now and then see after abdominal sections for other and graver affections. The contents of the abdomen are so little exposed and so little is done within the abdominal cavity, that there is no danger except from septic infection, which, with our care of to-day in this operation, is practically an eliminated factor of danger.

The recorded results in large numbers of cases by others, confirm this statement. Ventro-suspension, in addition to the ordinary plastic operations done for prolapse, did not in any way alter or retard the patient's progress to recovery. These cases have been operated on so recently that I do not know whether there will be any remote sequelæ that will detract from the value or final success of the operation. But its after-results so far have been so satisfactory to myself and so gratifying to the patients, that in all cases of prolapse of the uterus to the vulva, ventro-suspension will be done with the consent of the patient; and in view of the complete cure that can be promised, that consent will rarely be withheld.

As applied to the correction of complete prolapse, ventral suspension cannot be advised so confidently. Although it has been entirely successful so far as my own small experience goes, still there are several recorded cases of failure. Some of these are undoubtedly due to the fact that hysterorrhaphy alone, without the auxiliary plastic operations, was relied upon.

We have, then, to compare ventral suspension, supplemented, of course, with the necessary plastic work, with other operative procedures that may be chosen for the treatment of the affection. Vaginal hysterectomy has given, in many cases, very satisfactory results, but it is often followed by an intractable cystocele.

The character of the operation is such that this sequel cannot be prevented nor cured when it has once occurred. Ventro-suspension, even if it is followed by an occasional relapse, is by far the preferable operation.

The choice of operation, then, lies between hysterorrhaphy and abdominal hysterectomy. Baldy reports eight cases of supra-vaginal hysterectomy for prolapse, and describes the technique followed, which in the first part, is the ordinary operation (Baer's). Then he raises and attaches the cervix to the broad-ligament pedicles that contain ovarian arteries and sound ligaments. He thus utilizes the remaining portion of the cervix to draw up and anchor the stretched-out vagina. The advantages of this procedure over complete abdominal hysterectomy are at once apparent.

In one case Baldy¹ attached the cervix to the anterior abdominal wall.

Noble² also reports a case in which hysterorrhaphy had failed, and in which he did hysterectomy and attached the cervix to the abdominal wall.

These cases all gave satisfactory results.

The single advantage of hysterectomy over ventro-suspension is that it would probably eliminate the rare failures that might follow the latter operation. A very movable uterus can be removed with great facility and with very little danger, still the mortality of the operation is necessarily larger than that of ventro-suspension. When it is done for prolapse, the patient must submit, two or three weeks later, to additional plastic operations, and is confined in bed six weeks. When ventro-suspension is done the patient is consciously disturbed by only one operation, for the others that are required are done at the same time, and she recovers in three weeks. At the present time, my own choice of operation will be ventro-suspension with women of child-bearing age, and those quite advanced in years, for example, sixty-five and older, and in ordinary cases of complete prolapse. Should prolapse recur, the failure is not irremediable, for hysterectomy can then be done. However, in that class of cases in which the uterus has become greatly enlarged or its structure much changed from long-continued exposure, I believe that hysterectomy with all its disadvantages will give better results.

ANATOMY OF CONGENITAL EQUINO-VARUS.¹

FROM THE SEARS PATHOLOGICAL LABORATORY OF
THE HARVARD MEDICAL SCHOOL.

BY EDWARD H. NICHOLS, M.D., *Assistant in Pathology.*

THE two specimens of equino-varus illustrated in this article are the feet of a still-born child, delivered at term, in the Out-patient Clinic of the Boston Lying-in Hospital.

Besides the double club-foot there was a failure to close of the posterior wall of the neural canal in the occipital and dorsal regions, "partial cranio-rachischisis"; a lack of development of the right side of the heart, and a fetal mesentery.

The left foot was carefully dissected. The right foot was frozen, and cut in parallel sections in a plane corresponding to that of the malleoli. This method, so far as the writer knows, is a new one, and gives an accurate view of the relations of the parts, without the artifacts necessarily associated with any dissection of the deep structures.

THE NORMAL FOOT.

In the normal foot the astragalus lies tightly wedged between the tibia and fibula, with which its upper surface articulates, and this joint permits motion only in flexion and extension. In front of this joint the neck of the astragalus extends forward and slightly inwards, and terminates in an articular facet or head, which articulates with the scaphoid. The plane of this joint is practically at right angles to the long axis of the foot. The astragalus rests upon the os calcis, a little to its inner side, and the plane of the articular

¹ Read before the Boston Society for Medical Improvement, November 30, 1896.

² American Journal of Obstetrics, April, 1896.

³ American Gynecological and Obstetrical Journal, May, 1896.