

every half hour or so for a year or more; but by putting them to bed, freeing the uterus, omentum and bladder, and possibly removing a dead ligature, they have gotten along nicely.

In all fairness to Dr. Goffe, I wish to say that his paper is a scientific one and the fixation of the uterus in the anterior vault is one that in all probability will give less post-operative annoyance and sequelæ than others that have been so long practiced. The criticism offered with regard to the ease of the operation are like those of vaginal hysterectomy. It was a long time before physicians recognized that vaginal hysterectomy was an easy operation. It was really unfortunate they discovered it was an easy one, and yet it has taken the profession many years to recognize that fact.

Dr. GOFFE (closing the discussion)—I have very few remarks to make. A great many points have been suggested with which I do not agree, and while I should be glad to answer them in detail, I am afraid it would take too much time of the Section to do so. We are all agreed that a simple retroversion of the uterus is not so serious a condition as to require an elaborate surgical procedure for its relief. I believe we agreed, too, upon the point that it is only in certain selected cases that we advise patients who suffer in this way to undergo operation. As to the use of pessaries, my experience is that when a pessary is properly applied promptly after confinement, while involution is going on, the ligaments recover themselves sufficiently to retain the uterus in place. But in chronic cases of retroversion and retroflexion pessaries only afford temporary relief. Shortly after removing the pessary the condition is reproduced. That has been my experience, as well as the experience of men of wide observation. If we carefully look into the literature of the subject we will find that it is the experience of men who have kept watch of their cases most carefully, that only about 5 per cent of them that submit to pessaries are cured.

We all agree that in these cases the indications for operation are to be found in diseases of the appendages. Granting that is so, to reach the appendages we must open into the pelvic cavity, and the question resolves itself into the abdominal or vaginal route of entrance, and that is a question, I believe, that is going to be fought out in the next few years, and I believe the consensus of opinion to be in favor of the vaginal route. My own opinion at the present time is, and my own conduct in these cases, is never to do a laparotomy if I can avoid it. If I can in any way relieve a patient by vaginal incision instead of a laparotomy I always do it. I believe this is going to be the practice of the future. With regard to the length of time it is necessary to retain the uterus in an anteverted position in order to recover itself, and why it recovers itself I believe that if we can retain the uterus in an anteverted position for a certain length of time by something that does not impinge upon the utero-sacral ligaments as a pessary does, we allow the utero-sacral ligaments to recover themselves, to regain tonicity, the muscular tissue contracts, and as the utero-sacral ligaments recover themselves the uterus is retained permanently in place. The slight adhesions to the peritoneal membrane do not take the weight off the uterus; they do not overcome intra-abdominal pressure but simply direct the axis of the uterus, and we have done that in its proper channel, as indicated upon the board. We have intra-abdominal pressure carrying intra abdominal pressure forward.

In regard to the priority of the operation, I do not claim priority for this procedure. Wertheim of Germany has suggested it and practiced it; but before he published his paper, and before Dr. Byford published his paper, grounded on the same idea, I did my first operation, and while Wertheim has priority for publication in Germany, and Byford priority for publication in this country, about which I do not care, I am certainly entitled to priority for having done the operation in this country before it was published. It is my wish to bring this operation before the profession more pronouncedly than it has been done heretofore, with the hope of inducing some of you to adopt it. I shall do the operation tomorrow morning at 7:30 at the County Hospital in this city. I do not know how serious the operation may be, but it is a case which has been saved for a few days with the idea of doing an Alexander operation. I shall be glad to demonstrate to you the facility, ease or difficulty with which the operation can be done. I do not claim it is a simple operation. It is one that takes time and patience; but the results of the operation through the vagina are so satisfactory that I can highly recommend this procedure.

Police Reports.—The recent Latin-American Scientific Congress at Buenos Ayres passed a resolution urging the daily press to refrain from publishing police reports as "there is overwhelming evidence to show that they are direct incentives to ever-widening circles of suicide and crime."

DESCENSUS AND SUSPENSION OF OVARIES.

Presented to the Section on Obstetrics and Diseases of Women at the Forty-ninth Annual Meeting of the American Medical Association held at Denver, Colo., June 7-10, 1898.

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The medical profession has during the last two decades been more especially interested in the *exciting causes* of disease, the infections, and the ravages of these microbic invasions. The transcending value of the conquests in this direction amply explained and justified this tendency. But we are finding out that the infections, after all, are generally playing only a part, and, in some cases, a small part, in the aggregate causation of many diseases. We recall the tenets of our fathers who spoke of *predisposing causes* and find that these are just as prevalent in our day. Within the female pelvis and abdomen these causes are created mostly by displacements of the internal generative organs, with the consequent embarrassment of their circulation and impaired trophic conditions. As pertaining to the uterus, this fact has been recognized for a long time by the majority of gynecologists and general practitioners, and it explains the modern operative zeal for the cure of uterine displacements that is noble in its purpose, but very unfortunate in the choice of some unnatural methods (vagino- and ventrofixation or suspension). But, that descensus (badly called prolapse) of ovaries is a positive and potent pathologic factor, that it constitutes a large part of the aggregated evils in cases of retroversion of the uterus, that it justly demands permanent correction by suspension of each ovary so affected approximately in its normal position in conjunction with every surgical invasion of the pelvis that makes it possible and that, in the presence of such displaced ovaries, entrances to the pelvis for other causes should be so chosen as to make it possible to discharge this duty toward the adnexæ also—these are facts that need to be insisted upon and reiterated, not merely for general practitioners, but also for the majority of gynecologists.

The normal location of the ovary in the living woman was ascertained by Bernhardt S. Schulze,¹ the father of bimanual palpation, the one only searchlight in ordinary gynecologic diagnosis; and the clinical views of this ideal gynecologist were subsequently substantially confirmed by the anatomists Hasse,² Kölliker,³ His,⁴ Waldeyer⁵ and Vallin.⁶ During more recent years this topic has been invested with more practical interest than ever before, and it has been the subject of extended anatomic investigation, more especially by Aug. Martin⁷ and Dr. Hammerschlag,⁸ a student of Waldeyer. Minor differences of opinion still exist between the opinions of some investigators as to the exact location of the ovary; but they relate only to unimportant features, as, for instance, does the ovary lie more upon the anterior or the posterior part of the lateral wall of the true pelvis? Does it lie in a fossa, either specially designed for it, or resulting from indentation? But they agree in all important points—that the ovary lies against the lateral wall of the true pelvis, a little beneath its brim, and is sheltered by the tube and its mesentery (ala vesperitilonis) arching over it. It rests approximately in the

obturator fossa (Waldeyer), being suspended against the lateral wall of the pelvis, with its long diameter parallel to that of the body in erect posture, by means of the suspensory (spermatic) ligament attached to its upper pole, the ligamentum ovarii proprium connecting its lower pole with the corresponding cornu of the uterus, and by its hilum a sessile insertion of its straighter edge into a projecting niche upon the outer part of the upper surface of the broad ligament. Its free border, which is thicker and more rounded, is directed in an inward and posterior direction. While we are compelled here to omit extended details of anatomy, we note, however, two very important practical facts; 1, that the ovary is suspended within the true pelvis, nearly as high on either side, and nearly as far away from its median line as possible, and 2, that it will be acted upon by intra-abdominal pressure chiefly in a centrifugal direction, tending to support rather than to dislocate it.

Nature of descensus.—There are two degrees or stages of descensus ovariorum. In the first degree the ovary is arrested in its descent by the sacro-uterine fold or ligament of the same side, and lies against the side of the supra-vaginal portion of the cervix and body of the uterus, in what Waldeyer calls the fovia retro-ovarica, and what Coe⁹ and others call the retro-ovarian shelf. In this location it is readily felt by the vaginal finger in the posterior fornix of the vagina in bimanual palpation. In the second degree the ovary has passed over the sacro-uterine fold and then descends to the extreme bottom of Douglas' cul-de-sac, where the finger in simple vaginal palpation meets it at once, almost before coming in contact with the cervix. While both ovaries are not infrequently descended to the first degree, particularly when associated with an old and extreme reversion of the uterus, it is rare that both of them lie together in the bottom of the cul-de-sac. Probably on account of the sigmoid flexure, the left ovary is the one which descends by far the most frequently in both stages, and it is usually the one found in extreme descensus (or prolapse). In 77 cases of ovarian descensus Mundé¹⁰ found the left one alone displaced 46 times, the right 19 times, and both together 12 times.

Causes.—Aside from various upward, inward or backward displacements which the ovary experiences from neoplasms arising from the uterus or the broad ligament, it undergoes a downward displacement—which is here alone considered—from three different classes of causes.

1. Those which occasion an abnormal or disproportionate increase in its weight, as *a*, inflammatory processes due to direct local infection or to systemic infectious diseases, especially typhoid and scarlet fever, variola and influenza; *b*, multiple cystic degeneration of Graafian follicles and corpora lutea.

2. Relaxation of the ligamentary supports of the ovary, *a*, by enfeebling or wasting diseases (occasioned partly, perhaps, by the associated loss of fat from the tissues); *b*, subinvolution during the puerperal state, after they have undergone a physiologic and somewhat proportional elongation during gestation; *c*, elongation of its ligaments, particularly of the lateral or upper suspensory ligament, by vicious traction made upon them during conservative surgical work upon the tube or ovary through an opening into the peritoneal cavity, that does not admit of sufficient access to the lateral wall of the pelvis. This is the case sometimes when a very small median ventral

incision is made in corpulent women; and it is always so in any form of vaginal celiotomy (Sanger),¹¹ which is an eligible operation for extirpation of adnexæ, but not for conservative work upon them, because their displacement—which in many cases led to their diseased condition—is not remedied, but aggravated by it.

3. Finally and chiefly, retroversion and retroversion-flexion of the uterus are responsible for downward and inward displacement of ovaries, more than all other causes put together. The statement of H. T. Hanks¹² that 33 per cent. of all cases of such uterine displacement are accompanied by a descensus of one or both ovaries to at least the first degree, is a very moderate one. And the fact that they are not so displaced already in every case of retrodeviation of the long uterine axis does not argue for the innocence of the latter, because descensus of ovaries associated with a normally anteverted uterus occurs in only about 2 per cent. of cases that are not influenced by pelvic neoplasms or tubal swellings of any kind. It could not be otherwise, as the anatomy of the parts indicates. The utero-ovarian ligament (lig. ovar. proprium) is a firm, round, comparatively unyielding, fibro-muscular cord (Luschka)¹³ enveloped by peritoneum and only 2.6 cm. long. The other supports of the ovary, the hilum and the upper suspensory ligament, are little more than duplicatures of peritoneum containing areolar connective tissue, but practically no fibrous or muscular elements, and are therefore very yielding in character. They allow the ovary to ascend in the abdomen, with the fundus uteri during gestation, and to follow it at close range in all its voluntary or forced excursions in the pelvis.

Harmful factors incident to descensus.—These are, first partial venous stasis, and second, mechanical traumata.

1. As the ovary descends its venous current is obstructed by traction and torsion exercised upon its hilum; for the displacement occurs not merely by a sliding movement, but by a tipping over or rolling inward and downward (Sanger).

2. *Traumata from the uterus and rectum.* Although intra-abdominal pressure is everywhere equal and therefore affects all intra-peritoneal bodies from all sides alike, nevertheless, during coughing, sneezing, vomiting, and other straining efforts, as at defecation, there is a marked temporary and physiologic recession of abdominal viscera into the pelvis, that occurs by virtue of proportionally greater power vested notably in the diaphragm and other muscles in the upper part of the abdominal parietes. The consequent reduction in lumen of the abdominal cavity and temporary downward recession of its viscera is the domineering feature of intra-abdominal pressure in the pelvis. It is the sovereign factor in emptying the rectum; it is the greatest force exercised in the second stage of labor; it sustains the uterus in normal anteversion or holds it in constant retroversion according as it is guided forward sufficiently or not by its ligaments, and woe to the sensitive feminine testicle when it departs from its sheltered nook upon the side of the pelvis and approaches the median line of the pelvic canal where intra-abdominal pressure in this manner will be brought to bear upon it, through the medium of the rectum posteriorly, and the uterus anteriorly. The traumata thus inflicted upon the descended ovary are intensified when the body of the uterus lies retroverted, which is the case in probably 95 per cent. of

all cases of descensus ovariorum. In complete descensus at the bottom of the posterior cul-de-sac, the ovary lies as in a vise that acts irregularly, but very frequently. Every forcible exercise of intra-abdominal pressure crowds the (usually retroverted) uterus down upon it from above. Every filling of the sigmoid and passage by the rectum brings contusions from behind or below; and normal coitus is scarcely possible without bruising the usually hyperemic, edematous or inflamed ovary and causing much pain. When the ovary has descended only to the first degree, and lies backward and to the side of the uterus in the sulcus created by the sacro-uterine ligament or fold, it does not experience the traumata mentioned so directly and invariably, but, like a floating body in the knee-joint, it may be caught at any time and is compressed frequently and violently enough (Goodell)¹⁴ to carry it beyond the domain of conservative treatment, unless it be restored to normal position permanently—with resection when necessary—before a number of years elapse.

The *pathologic changes* that occur in such ovaries in consequence of the constant venous hyperemia and innumerable traumata are: 1, hematomata in Graafian follicles and corpora lutea; 2, edema; 3, connective tissue hyperplasia, which is well known to result from constant embarrassment of the venous current, in other organs of the body; 4, chronic oophoritis, leading to multiple cystic follicular degeneration, usually in parts of an ovary, and cirrhotic conditions in other parts; 5, even perioophoritis and eventually peritoneal fixation may occur without infection, according to Sanger.¹⁵

It is often impossible, but likewise non-essential, to determine whether descensus of an ovary, in a given case, is the cause or the result of an inflammation or degeneration of the organ. For, while it may be the entire source of disorder in the former case, in the latter it imposes insurmountable barriers to all natural forces in their efforts to establish a *restitutio ad integrum*.

The *indication* to permanently reduce such dislocation of ovaries is therefore general; and it should be done by non-surgical means when possible, and with surgical measures when necessary, especially when resection of them is also required. That ovaries so displaced, diseased, and distressing to their bearers, can by such treatment, be restored to good or relative health anatomically and functionally and, in the great majority of cases, do not require extirpation, my experience during the past five years has abundantly proven in several hundred cases. Naturally the prospect or advisability of saving these organs becomes constantly less the longer the vices incident to the displacement have acted upon them and have induced greater anatomic changes. They are also much less in those comparatively rare cases where their descensus occurred in connection with a normally anteverted uterus.

So-called medical treatment for this disorder is really effective for a few cases in that category only in which the descensus (prolapse) of the ovary is associated with a retroversion of the uterus, namely, in recent cases of this kind, following within a month or two after parturition, in which subinvolution is a prominent factor. If involution of the uterus and of the uterine and ovarian ligaments be promoted in these cases by an early restoration and retention of the retroverted uterus and descended ovaries in nor-

mal position by a properly fitting pessary, and if this be supplemented possibly with a vagino-abdominal faradic current of not more than sixty interruptions to the minute, or by massage of the uterus in anteversion, and by tonic medical treatment, then a cure of the displacement of both uterus and ovaries is here sometimes attained. In non-puerperal cases, however, usually only temporary relief is obtained by these means. In cases that are associated with a retroverted uterus that can not be brought into thorough anteversion by bimanual manipulation preferably—owing to peritoneal adhesions or infiltration in its supports—so that this invariable and absolute preliminary requirement for the use of any pessary can not be fulfilled, all local medical treatment resolves itself, among other minor agents, into the abstraction of water from the parts by from one to two ounces of glycerin (with bichlorid of mercury, 1 to 4000), applied by means of tampons of elastic (non-absorbent) sterilized cotton or wool. These are best applied when the patient is in the genu-pectoral position, and the cervix has been drawn or crowded into the sacral hollow. They may be left in forty-eight to sixty hours, and should be renewed in a day or two. If no septic elements linger in the adnexæ, the tenderness may hereby be so much reduced that bimanual massage may liberate the organs and right their position so that a pessary becomes a possibility, but also a life-long necessity. But the only really effective treatment for descended (or prolapsed) ovaries, with given exceptions, is essentially of a surgical nature. And, while this subject eminently deserves the careful attention of all general practitioners and medical specialists, because it furnishes an anatomic reason for many a persistent dyspepsia, vaso-motor disturbance or neuralgia, still I would address myself chiefly to those who have occasion and facilities for working in the pelvic peritoneal cavity; I would call their attention to the important duty, namely, in every instance before closing this cavity, to see to it that the uterus and every ovary that is allowed to remain, is also given the most favorable opportunity to remain healthy, by securing each organ as nearly as possible in its normal position or environments by dealing with natural structures in a manner that does not disarrange the normal anatomy or disturb the physiology of these or other adjacent organs. Furthermore, I would remind them of the fact that with surgical methods that are designed to rectify displacements of the uterus alone merely, we are discharging but little more than half of our duty in many cases, that a nearly equal obligation frequently obtains with reference to the adnexæ, to relieve them of diseased portions (resection), or of incipient disordered conditions (salpingostomy) and to secure them in a normal location. Certainly the restoration of the displaced uterus is a most potent and unavoidable means for the replacement and retention of descended ovaries, but it is not the only or all sufficient means in the majority of cases. But a choice of a surgical method for the most frequently associated retro-deviation of the fundus uteri is necessary for the relief of a descended ovary. Vagino-fixation, ventrofixation and ventrosuspension being intrinsically very unnatural and unsurgical procedures, and giving rise to disorders in gestation and obstructions in labor on the one hand, and intestinal obstruction on the other, are not eligible as normal procedures in women who retain a capacity for conception. Nor are they

adapted to serve harmoniously with other surgical acts that are demanded by descensus of adnexæ.

The most nearly ideal structures to deal with to meet the combined requirements of a retroverted uterus and descended ovaries, with certain exceptions, are the round ligaments of the uterus. These ligaments may be dealt with by three different routes: 1. *By vaginal section*, by which they may be shortened intra-abdominally or may be drawn out and fastened to the vaginal wound. This route is, however, only suitable in cases where no conservation work upon the ovaries or tubes is needed, so that they do not need to be drawn into the vaginal wound, away from their more lateral location, and then dropped into an abnormal situation. 2. *Ventral celiotomy*. This is the proper route to deal with descended ovaries, with or without an associated retro-deviation of the fundus uteri, in all cases that are complicated, not merely by adhesions, but probably also by lingering actively septic elements. After removing all depots of the latter, and thoroughly liberating all remaining parts, the uterus should be secured in normal anteversion when necessary by intra-abdominal shortening of the round ligaments, every remaining dislocated ovary should be suspended in the following manner: A full-curved cambrio needle armed with fine silk, suitable for intestinal work, is passed through the web that connects the abdominal ostium of the tube with the ovary—called the ovarian fimbria—about midway between the two, and so as to grasp from one-half to one cm. of its free edge. The needle is next made to grasp a similar amount of the inner free border of the spermatic or proper suspensory ligament of the ovary near the ilio-pectineal line. Usually two stitches, about a cm. apart, are so placed and tied. In passing the needle through the spermatic ligament, it is usually well to draw out its free border with a forceps so as to avoid puncturing veins that are very prevalent in it. Thus the ovary and infundibulum of the tube are both suspended mediately in approximately normal relation to each other and without direct fixation of either, leaving to each a range of mobility. 3. *By way of the inguinal canals and dilated internal inguinal rings*. This is the most nearly ideal route by which to shorten the round ligaments of the uterus, and gives the least objectionable and most enduring results in permanently correcting the displacements for which it is intended, if properly performed. It is therefore desirable to treat as many cases by this modified and improved method of Alexander as possible; and, indeed, it is very serviceable, not merely for uncomplicated freely movable retro-displacements of the fundus uteri and descended adnexæ, but also for that large class of such displacements in which the formerly active septic or infectious factors have died out, but have left behind an array of adhesions about these organs and various removable deformations and degenerated portions of adnexæ. This very important work can be done by this route efficiently and safely, both as to primary and sequent developments, by cutting only skin, fat, and sometimes peritoneum, and separating all other tissues about the inguinal canal bluntly, by stretching the internal inguinal ring (which in every case must be opened to admit of a proper shortening of almost every round ligament) enough to admit an index finger, and by introducing this finger, and if necessary the next one also, through this opening, freeing the uterus and adnexæ of all

adhesions or fixations and bringing the tube and ovary up into and out of the wound where salpingotomy, destruction of cystic follicles or resection of the ovary, and suspension of it, can be done singly or collectively as required, or the tube and ovary may be taken out if worthless. The internal inguinal ring is situated on a line nearly anterior to the lateral and upper suspensory ligament of these organs. Therefore, the farther or the more readily the upper pole of the ovary is drawn out the greater is the relaxation of its upper suspensory ligament, and the clearer is the indication as well as the possibility of shortening it. In this operation this is done by passing fine silk sutures around the ovarian fimbria, as above stated, and uniting this to the inner edge of the spermatic ligament well drawn out, at a point as low down in the wound as can be reached by depressing the surrounding abdominal wall.

This not very easy, but very innocent, and extremely benign work on the patients, I have gradually developed since Sept. 18, 1893, when for the first time I failed to find a round ligament in performing an Alexander operation upon a mentally deranged patient who would not admit of careful previous examination. Instead of giving it up, which I have never done, I opened up the wound into the abdomen and traced the round ligament from the uterus outward. Incidentally, I discovered a menacing tube and ovary and removed them, obtaining a good recovery of the patient mentally and physically. During the last seventeen months I have performed this extended Alexander operation thirty-six times; eleven times the simple operation was done with no intra-peritoneal work upon the adnexæ aside from exploring them in each case on one or both sides with a finger introduced through the ring, and suspending one ovary in a few of the cases; thirteen times with resection of one or both ovaries, making a suspension of the latter in about half the number of ovaries dealt with, and restoring the canal of the tube in a smaller number. In twelve, or one-third of the cases, I removed the appendages of one side; and in some of these resected and suspended those of the opposite side. In an experience with about one hundred and forty cases, the Alexander operation, variously modified, has not only not been responsible for any death, nor followed by hernia or any other evil sequel; but the general average of morbidity during convalescence is much lower than of abdominal sections proper in which only the same amount of work has been done upon the same organs, but much more incidental exposure and manipulation of intestines especially was necessary. The general average of good health during subsequent years in cases of such displacements that were surgically treated upon this plan, either intra-abdominally or by way of the inguinal canals, so that not the uterus only but the ovaries also were secured in normal position is much better than of similar cases in which the uterus *alone* was formerly attended to by the same and other less eligible methods.

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FURTHER EXPERIENCES IN THE MANAGEMENT OF UTERINE DISPLACEMENTS.

Presented to the Section of Obstetrics and Diseases of Women, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

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I have been prompted to present this subject on account of the misapprehension which, I believe, has prevailed respecting the character of an abnormal position of the uterus, and the method of treatment that should be adopted for the correction in certain cases.

It has been a frequent occurrence to meet with cases having a marked backward displacement where a pessary had been inserted and worn for a considerable period without an attempt being made to overcome the adhesions and to restore the organ to a position as nearly normal as possible.

For convenience in treatment, uterine displacement may properly be divided into two classes, namely: anterior and posterior rotation.

I have often found the former division to yield quite readily to dilatation and to the maintaining of the patency of the cervical canal; this can be effected by the employment of a glass drainage-tube while the patient is kept in a recumbent position. In those cases in which there is much congestion or inflammation of the uterine canal or of the tissues connected with the appendages, douches or other local applications should be used previous to dilatation and drainage.

Of the two results that follow anterior displacement, I have noticed that sterility has been the more common condition or has not been as easy to control as has dysmenorrhea.

Within the past year I have observed an unusual number of cases of sterility dependent on a pre-natural closure of the uterine cervical canal. In one case my records show that the patient had some eight years before given birth to a child: the ante flexion of the corpus uteri was of the third stage, or of an angle about forty degrees. In endeavoring to effect dilatation I found that there existed much hyperplasia of the cervix, which was evidently the result of an old endometritis. An innocent-looking exudation taken from the cervix, when placed under the microscope, revealed the presence of gonococci, the existence of which must have been of long standing and must have contributed to the sterility and to the changes that had taken place in the endometrium. Dilatation of the canal, incision of the interior of its cervical portion, curettement, drainage and cauterization with a 60 per cent. solution of chlorid of zinc finally overcame the dysmenorrhea and relieved the essential symptoms.

In some instances I have found that ante flexion resulted undoubtedly from congenital causes. In very marked or aggravated cases I have observed vesical symptoms to arise. The urine may contain a

muco-purulent sediment. After dilatation and other local measures have been tried, a properly fitted Hodge pessary, introduced so as to lift the uterine fundus from the bladder, afforded satisfactory relief.

As regards anteversion, I have found that condition often associated with subinvolution and therefore has been the result of pregnancy and of parturition, laceration of the cervix, and relaxation or inflammation of the uterine ligaments. Dilatation, curettement, and the direct application of iodine and of other alterative agents have proved excellent preliminary measures of treatment. The laceration of the cervix and of the perineum and also of other parts should in due time be attended to.

In two cases of ante flexion of the third degree, pregnancy took place before opportunity for a systematic plan of treatment could be carried out. In one of the cases vomiting of pregnancy occurring after the tenth week became alarming; this, however, was brought under control by rest and by tamponading the vagina so as to elevate the uterus from the rectal, sacral, and vesical tissues. Such vomiting can often be relieved by the milder means used for replacement of the uterus. If, however, there are firm adhesions, as there were in a case to which I was called some months since little can be safely attempted in this respect until after the term of pregnancy has been completed.

It is sometimes said that the stimulating effect of pregnancy tends to improve the development of the uterus and thus to overcome the ante flexion. In one of my patients, notwithstanding pregnancy went twice to full term, the ante flexion recurred soon after each parturient process had taken place.

As before remarked, I have relied in the treatment of ante flexion much upon resort to dilatation, either by the gradual or by the rapid method, as the condition of the case would seem to justify. In regard to the time when rapid or more forcible dilatation should be attempted, much will depend upon the character of the case. If there is evidence of much old hyperplasia, with a preternaturally small cervical canal, dilatation should be had recourse to as soon after menstruation as it will be deemed expedient to undertake. If, however, the cervix is soft and imperfect in its size and shape and there is a tendency to menorrhagia or metrorrhagia, the operation should not be performed for some days after the flow has ceased.

In dilating the uterus I have noticed that much care should be taken not to exercise too much force in the beginning; the condition of the tissues somewhat above the internal os should not be overlooked. In cases in which there is considerable hyperplasia or induration of cervical tissue, incision of the parts within the canal will be most helpful; the sudden forcible stretching of the tissues without incision is liable to be followed with delay in recovery or with other untoward results. In cases in which there is a complication of salpingitis, ovaritis, or other inflammatory processes, rest and preliminary treatment should be tried before the more radical measures are employed.

In all cases, after dilatation has been effected, the patient should be kept for a considerable period in the horizontal posture. If sterility or dysmenorrhea continue, dilatation, curettement and intra-uterine applications should be repeated at proper intervals. I have found, however, that when treatment was seasonably undertaken, favorable results in a large percentage of cases were early achieved.