

2. *Congenital Ante-, Retro-, and Lateropositions of the Uterus.*—The uterus, although normally formed, may be situated too near the anterior, posterior, or lateral wall of the pelvis. If displaced laterally, it is usually toward

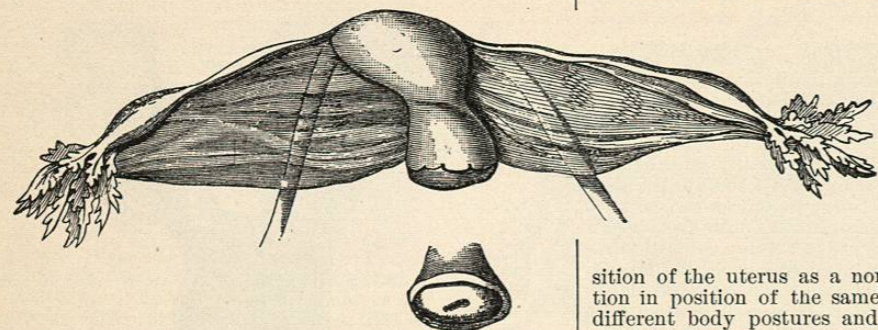


FIG. 4894.—Obliquity of the Uterus. (After Tiedemann.)

the left side. Contraction of one or the other broad ligament, and unusual size of neighboring organs, may bring about this result.

3. *The Double-mouthed Uterus: Uterus Biforus.*—An antero-posterior partition may divide the external os into two lateral halves, the cervix and uterus being otherwise normal in every particular. As in other forms of septate uterus, of which this represents the least pronounced type, the dividing band may offer an obstacle to the passage of the presenting fetal extremity, and may, when ruptured, either cause considerable hemorrhage or form a starting-point for septic infection. If the septum during labor cannot be pushed aside, it can with safety be ligated in two portions and divided.

4. *Abnormal Plication of the Cervical Cavity.*—In this condition a fold of tissue, not unlike a second portio vaginalis, projects into the cervical canal, causing hemorrhages occasionally, and leading also to tedious labor. Incision or ablation is sometimes indicated.

5. *Abnormal Communications with the Uterus.*—The uterus may either open into the cloaca, or have faulty communications with different portions of the urinary system, or with the rectum. A case is on record in which one side of a uterus bipartitus opened upon the external surface of the body.

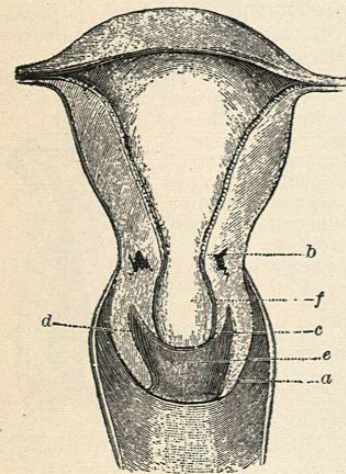


FIG. 4895.—Abnormal Plication in the Cervical Cavity. (After P. Müller.) a, Os externum; b, os internum; c, d, abnormal fold; e, f, cervical cavity.

and to become pregnant in this peculiar situation, Cæsaræan section being thereby necessitated.

George Woodruff Johnston.

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UTERUS, DISEASES OF: DISPLACEMENTS.

—A displacement of the uterus may be defined as a permanent departure from a normal position, and is therefore to be sharply distinguished from a temporary normal deviation. One reason for the slowness of investigators in the past to agree upon any position of the uterus as a normal one has been the variation in position of the same uterus when examined in different body postures and under different conditions of distention of the bowels by gas or fæces, or of the bladder by urine. In the perfectly normal pelvis the range of mobility is great, the condition being one of delicate poise maintained by the resultant of various forces, while the supporting structures are elastic, and some of them (round ligaments) are contractile.

Several structures more or less yielding and elastic serve to maintain the uterus in position. The upper portions of the broad ligaments at the sides and the round ligaments forward and laterally serve chiefly as stays or guys. Connective tissue in the lower portions of the broad ligaments, together with the so-called uterosacral ligaments and bladder attachments in front, serves as a kind of sling attached low down on the organ, and gives support to its weight. The most important supporting structures are the muscles and fascia of the pelvic floor, chiefly the levator ani and coccygeus muscles, and the internal pelvic fascia with the perineal fascia (Fig. 4896). Another supporting influence may be likened to hydrostatic pressure. When the pelvic floor is intact, the tonicity of its muscles and of those of the abdominal wall serves to some extent to float, as it were, all movable bodies in the abdomen. This support is greatly reduced when the abdominal parietes have lost their normal tone.

The uterus moves with the whole pelvic diaphragm in the acts of vomiting, violent coughing, or straining in defecation. As it is attached to the bladder by a comparatively broad surface, the constantly varying distention of that organ swings the upper part of the uterus forward and backward. A range of normal mobility of several inches can be demonstrated without instrumental traction by contrasting the position of the cervix when the patient is in the standing position, with its position in the knee-chest posture after air distends the vagina. Under anæsthesia the cervix may with a tenaculum be drawn to the vaginal outlet without injury.

It must be understood that nearly all illustrations of the female pelvis are misleading, in that for the sake of clearness the vagina, bladder, and rectum are represented as distended, whereas the walls of the empty organs are in contact and occupy very little space. The normal uterus is poised in the pelvis, the organs

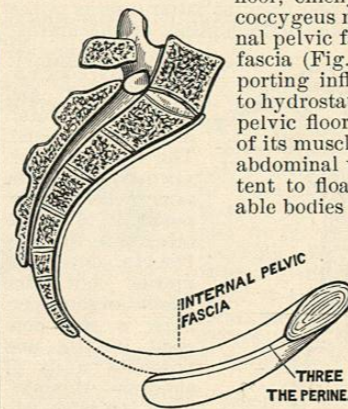


FIG. 4896.—Diagram showing Arrangement of Pelvic and Perineal Fasciæ. (Tarnier.)

being empty, the cervical portion almost central and as high as the top of the symphysis pubis, the fundus inclined forward almost horizontally and at times a little to the right or left to accommodate the rectum. The fundus is readily felt by the examining hand near the pubic bone, behind and below a line joining the promontory of the sacrum with the top of the symphysis (Fig. 4897).

CAUSES OF DISPLACEMENT.—Congenital defects of development result in some changes of position, chiefly backward deviation of the axis or a curving of the axis of the organ forward upon itself. These congenital alterations are usually accompanied by an imperfect development of ovaries and tubes, as well as of the uterus, though the external genitalia may be normal. The accompanying dysmenorrhœa and sterility are usually difficult to overcome.

Acquired displacements may be due to sudden strains, especially downward strains, to the slow action of tumor pressure, of gravity, of intra-abdominal pressure, or of contraction of inflammatory adhesions, while among contributing causes are laceration of the pelvic floor, subinvolution after labor, hyperplasia, œdema, passive congestion, general loss of muscular tone, faulty dress, constipation, infrequent emptying of bowel and bladder.

Sudden or acute displacements are usually backward and downward. They occur in persons who have sustained laceration or overdistention of the pelvic floor, though a few cases have been reported in which the cervix has appeared through the vulva in the virgin as the result of strain, and it is not very uncommon to have the fundus forced backward into acute retroversion in the unmarried. The history of the case usually shows that strain had been applied while the person was in an extreme stooping posture, as in lifting a heavy weight from the floor, or it may result from a fall upon the nates. One of the writer's patients, when a girl of fifteen years, previously perfectly well and totally unconscious of her anatomy, while lifting the corner of a heavy cook stove and trying to put a block under it, felt something "give way." Great pain in the lower pelvis and back followed, confining her to bed for a few days. There was soreness in walking, lasting months. The uterus remained in retroversion, and was an element in a disability which had continued for years until completely relieved by operation. Another patient, with a rather fat abdomen and an impaired pelvic floor, suffered acute retroversion while stooping and lifting the tray of a trunk. There were acute pain in the pelvis and back, frequent urination, and pain down the thighs. The uterus was caught below the promontory of the sacrum. Immediate relief followed the reduction of the displacement. In the extreme flexion of the thighs or the abdomen, not only is the muscular support of the perineum relaxed, but considerable pressure is made by the thighs upon the abdomen. The relief obtained in the squatting position, naturally assumed by some persons in extreme cases of difficult defecation, illustrates the mechanical principles involved. The uterus when suddenly forced down and back is most likely to be caught below the sacral promontory when the organ is somewhat enlarged by an early pregnancy or when the promontory projects well forward.

Laceration of the pelvic floor and imperfect involution after labor are the two chief elements in the production of *gradually acquired* displacements. The lacerations which occur during labor are not to be regarded as involving only the perineal body and the outlet of the vagina. A very complicated series of changes has taken place in the whole pelvic diaphragm. Planes of fascia are torn, and they slide one upon the other. Their attachments are pulled away, especially from the central areas. Great muscle planes are relaxed and torn apart, so that the levator ani, the coccygeus, and co-ordinating structures act less perfectly as a sling for the support of the pelvic viscera. If the upright position is resumed too early after confinement, and if the patient takes too little rest, not only the uterus but all the pelvic tissues fail to regain their normal tone. The uterus remains soft, large,

and flaccid, and under the mechanical influence of gravity and imperfect support an exceedingly complicated change of relation of parts follows, infinitely varied according to the integrity of the holding power of uterine parts; but the uterus tends slowly to descend, tilting backward as an early step; the vaginal walls, becoming lax and redundant, are protruded before the descending

bladder and rectum, until in extreme cases a true hernia of pelvic contents and even small intestine takes place through the pelvic outlet. The contraction of adhesions which result from inflammatory disease in the abdomen, is responsible for some well-marked uterine displacements, especially those in a backward and those in a lateral direction. When, for example, a collection of pus, two or three inches in diameter, forms behind the uterus and broad ligaments, a heavy wall of plastic exudate unites the uterus and upper edges of the broad ligaments to the large intestine behind or to both large and small intestines, the omentum still further covering in the mass. Should this pus escape into the bowel or bladder or by the slow process of absorption disappear, the limiting wall of adhesions, following the shrinkage, slowly contracts around the remains of the mass. This contraction will in some cases fix the uterus and tubes, pulling the former slowly back over the disappearing pus sac. The influence of other causes which have been mentioned is obvious without detailed description.

VARIETIES.—The varieties to be described are: Upward, lateral, forward, backward, and downward; the organ may also occupy various hernial sacs, or may be completely turned inside out, the so-called inversion. Upward displacement of the uterus is seen only as the result of the growth of tumors. A dermoid cyst of the ovary for example, or a nodule of a fibroma of the uterus, may become adherent in the pelvis behind the uterus, and by its growth push that organ out of the pelvic cavity entirely. Uterine fibromas which completely surround the uterus, grow too large for the pelvic cavity, and drag the uterus and bladder upward, stretching the vagina, so that on examination the os uteri is found to be completely beyond the reach of the finger. The treatment is determined by ordinary surgical principles in the removal of the growths, should that be called for.

Lateral displacement may follow contraction of plastic exudate or adhesions about an obliterated pelvic abscess.

FIG. 4897.—Normal Position of the Uterus.

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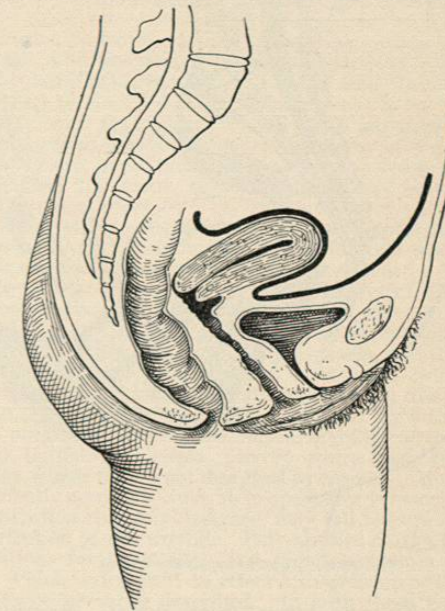


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especially in the broad ligament or peri-uterine connective tissue. The writer has seen the uterine cornu attached hard and fast to the bony pelvis at the side from such a cause. The abscess had been drained above

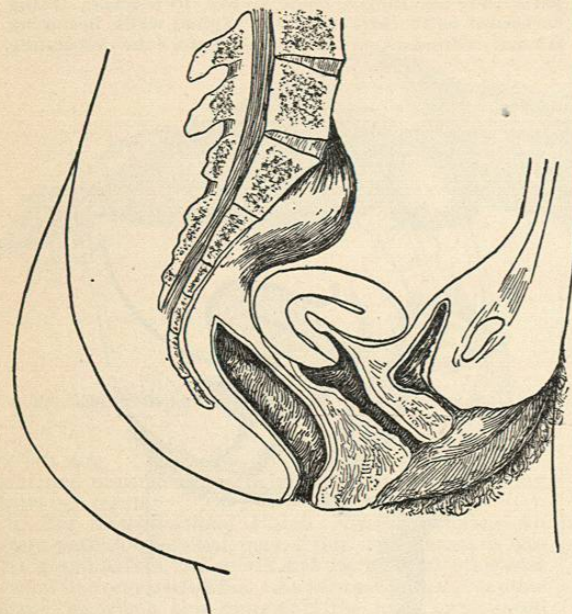


FIG. 4898.—Ante-flexion of the Uterus.

Poupart's ligament several years before. Broad-ligament cysts and intraligamentary uterine fibromata crowd the uterus to one side. No symptoms are directly caused by these forms of displacement.

Displacement Forward; Anteversion.—Twenty-five years ago the inclination of the axis of the uterus well forward (anteversion) was considered to be pathological by many gynecologists, and much ingenuity was expended upon the mechanical correction of the supposed resulting disabilities, including sterility, frequent urination, and dysmenorrhœa, by pessaries or by operations on the cervix or vagina. As the result of further observation opinion has changed, so that treatment is now no longer directed to this condition, and the object of the numerous operations is to induce the uterus to stay forward in what is now considered the normal position.

Ante-flexion, however, when of extreme degree is recognized as pathological. This involves a bending or curving forward of the uterine axis. It is frequently found in an infantile or undeveloped uterus, associated with scanty, painful menstruation and sterility in persons of neurotic tendencies (Fig. 4898). Much discussion has arisen as to the rôle played by the flexion in the production of pains and sterility. It is claimed with truth that there is no real obstacle presented to the passage of menstrual blood or of spermatozoa unless the uterine canal is sharply bent at an angle. A gradual curve, no matter how short its radius, does not affect the lumen of the uterine canal. Above a sharp angle, however, clots may form, and as they enlarge they produce a valve-like closure at the point of flexion. A point of great tenderness may at times be detected by the sound at the angle. One theory is that increased vascular tension induces painful pressure at this point. Where the endometrium is swollen or diseased, as evidenced by tenderness and abnormal discharges, benefit in a few cases may be obtained by a cautious dilatation and curetting of the uterine cavity, followed by packing of the canal, for twenty-four or forty-eight hours, with sterile or iodoformized gauze to maintain the dilatation; or, according to a few authorities, a stem pessary may be introduced to secure the healing of

the parts in a more normal direction. Such methods require care and good judgment, as salpingitis or endometritis may be readily caused. Prevailing opinion is against the protracted wearing of stem pessaries, because of their dangerous pressure or irritation as foreign bodies. If the ovaries and tubes, as well as the uterus, are of sufficient development to allow pregnancy to occur, the conditions are usually greatly improved after labor and the subsequent involution of the parts. In many cases of undersized flexed uterus, the only benefit to be secured is through general tonic and roborant treatment directed to the improvement of the impaired nutrition of the nervous system, which is apt to be present. When the uterus is quite small, it does not develop under physiological stimuli and the sterility is permanent.

COMBINATION OF VARIETIES.—An abnormal curvature may accompany an abnormal position. For example, ante-flexion may be combined with retroversion (Fig. 4899).

When the uterine canal remains straight, the backward change of direction of the whole organ beyond the perpendicular line of the body constitutes a *retroversion* (Fig. 4900). When the canal is curved backward by a bend in the body of the organ, the condition is known as *retroflexion* (Fig. 4901). The two conditions are very commonly combined, constituting the most important of the series of displacements, except downward displacements. The degrees of malposition are sometimes divided into groups, called first, second, and third, though their limits are arbitrary and of little practical value.

Retroversion and retroflexion may be considered together, as clinically their symptomatology and treatment are much the same.

Retroversion of a small healthy uterus which has not descended, occurring in a woman who has an intact pelvic floor and healthy ovaries and uterine tubes, may not cause any symptoms. Such a state of affairs would not call for treatment were it discovered. In almost all cases,

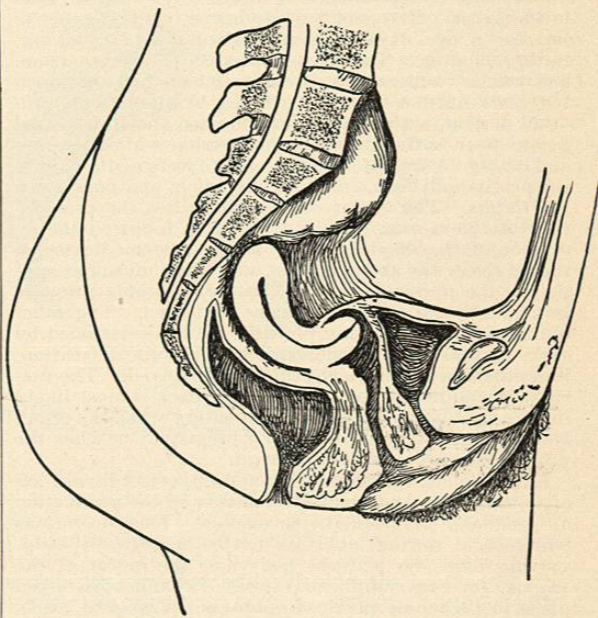


FIG. 4899.—Ante-flexion with Retroversion.

however, the backward uterine displacement appears as a feature in a more or less complicated situation, which includes lacerated pelvic floor, prolapse of ovaries and tubes, possibly with adhesions, uterine descent, engorgement of pelvic vessels, subinvolution, endometritis, pelvic peritonitis.

Symptoms.—The symptoms of backache, bearing down, irritable bladder, increased duration and quantity with lessened interval of menstrual flow, are frequent. Occasionally patients complain of interference with defeca-

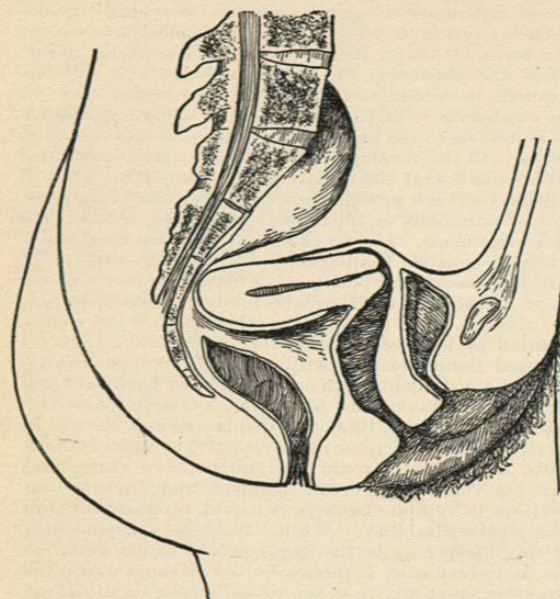


FIG. 4900.—Retroversion of the Uterus.

tion, and while lack of expulsive force, due to laxity of the pelvic floor, is most apt to cause the symptom, there seem to be a few cases in which the retroposed fundus does act as a partial obstruction to the onward passage of the contents of the rectum. Not all of these symptoms may be due to the retroversion, but the condition cannot be cured if this is not corrected. Indeed it must be constantly borne in mind, in considering all forms of uterine displacement, that it is frequently the conditions which accompany these disorders which give rise to symptoms and not the change in position or of curvature considered by itself.

Diagnosis.—The diagnosis is made by locating the relative position of the uterine fundus and of the cervix by means of the two hands, one pressing down the lower abdominal walls, while one or two fingers of the other are introduced into the vagina with firm backward and inward pressure. When the abdominal walls are rigid or the parts small, an anæsthetic may be required. It may be necessary to draw the whole uterine body downward by a tenaculum hooked into the cervix. It is unnecessary and often dangerous to introduce the uterine sound for purposes of diagnosis.

Replacement.—The use of a uterine sound or a jointed rod reposer within the uterus is to be condemned as likely to work mechanical injury, especially where peritoneal adhesions exist, and because a very early pregnancy cannot be excluded. By drawing down the cervix with a tenaculum, and carefully picking up the fundus with the hand applied to the abdomen, at the same time that the cervix is swung backward and inward, any non-adherent retroverted uterus can, with a little patience, be brought forward, although the manipulation may require some skill and practice. Until this replacement has been carried out, it is difficult and frequently impossible to determine with accuracy the condition of the prolapsed ovaries and tubes. When there are no peritoneal adhesions binding down the fundus, or when the median portions of the tubes and broad ligaments are free, the replacement of the uterus can be completely effected. Attention must then be turned to the problem, frequently a complicated one, of maintaining the organ

permanently in a forward position. Lacerations of the pelvic floor must be repaired as a preliminary step, whether the mechanical support of a pessary is to be used or not. If it be decided not to use a pessary, various operations may be considered.

Prognosis.—Permanent cure may in a small percentage of cases be secured by repeated reduction and systematic massage, but the method is uncertain and open to objection. After the correction of constipation by laxatives, of uterine hyperplasia and pelvic congestion by hot douches, rest, medicated tampons containing especially ichthyol and boroglyceride, the use of some form of pessary may be considered. This instrument is far less frequently used than formerly, and there are many gynecologists who seldom or never make use of a pessary. Nevertheless, in the hands of a careful physician, of good mechanical judgment, this instrument may be made to give much comfort to a certain number of patients; it may even effect a cure in a few cases, especially those suffering from subinvolution after childbirth when only a few months have intervened since the labor.

The prognosis is good in all pathological forms of uterine displacement, if treatment is extended to the removal of causes, to the correction of concurrent conditions like endometritis and uterine hyperplasia, and if operations be carried out upon sound mechanical principles. Very many operations have, however, proved disappointing in their ultimate results, or they have, by interfering with pregnancy or with the normal mobility of the parts or by inducing a hernia, proved worse than the conditions which they were designed to correct. Moreover, a perfectly aseptic technique in operating is essential, for an operation correctly designed may fail to cure because of infection of the wound. This applies particularly to operations for shortening the round ligaments and to that which is designed to effect a suspension of the uterus, to be hereafter described. In both these instances infection may be followed by disastrous results, which leave the patient in a worse state than before.

Pessaries for the correction of anteversion are seldom required, and have gone almost entirely out of use. For posterior displacements the most useful form of pessary

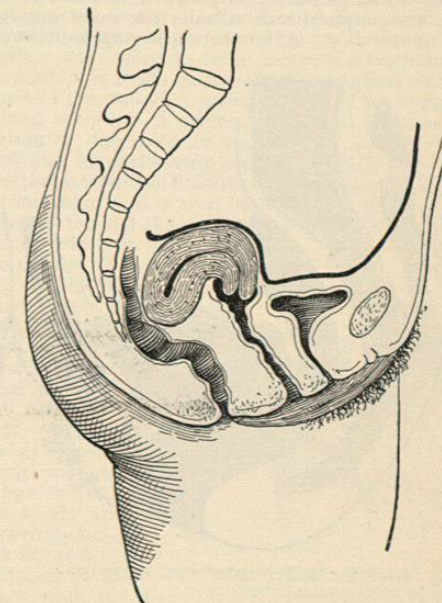


FIG. 4901.—Retroflexion of the Uterus.

belongs to the type represented by that known as the Smith-Hodge, which consists of a hard-rubber ring, flattened at the sides and with a double curve, the upper and posterior extremities being designed to hold the fun-

dus forward and at the same time draw the cervix backward (Fig. 4902). The anterior end is curved downward slightly so as to avoid pressure on the urethra. In conditions of great relaxation of the parts, a plain ring of soft rubber is occasionally used, but much greater irritation is produced by it than by the hard-rubber instrument. Much ingenuity has been expended upon the mechanical support of the uterus, and the number of instruments suggested is very great. Very few of them, however, have acquired a permanent place in the treatment of the conditions for which they were designed, and a description of the numerous varieties will not be here attempted. When the causes which produced the original displacement can be removed by operation, the results are usually much more satisfactory, as the wearing of any instrument is a continual source of irritation, and more or less constant supervision by the physician is required. In particular, all forms of instrument which obtain the necessary support from external straps are unsatisfactory and in many cases injurious.

Stem Pessaries.—Many attempts have been made, by the use of an intra-uterine stem having the curve of a normal uterine canal, to correct flexions of the uterus. While it is possible, after complete dilatation and under aseptic conditions, for the uterus to tolerate such a foreign body, the dangers of endometritis, salpingitis, or other results from irritation have led to the abandonment of the instrument by the majority of gynecologists. The theoretical advantages are more than offset by the injurious results which have followed its use in some cases. If they are used at all, abundant provision must be made for the drainage of the normal secretions of the part. When any form of pessary is worn, a daily cleansing douche is required, and at least once a month the instrument must be removed by the physician and the effects of injurious pressure looked for.

Among the chief causes of failure in the use of instruments for the correction of uterine displacements, the greatest is the presence of inflammatory adhesions, either of the uterus itself, which may be thus confined in its abnormal position, or of the ovaries, broad ligaments, and Fallopian tubes. Retroversion especially is very commonly accompanied by salpingitis, metritis, or endometritis; and salpingitis is usually the more important disorder of the two. After the acute stages of tubal in-

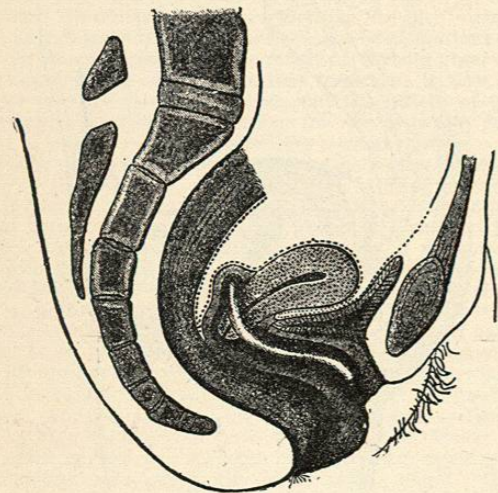


FIG. 4902.—Smith-Hodge Pessary in Position.

flammation have entirely passed, and after all exudates have been absorbed or organized, the resulting adhesions of previously smooth peritoneal surfaces are often firmly established and remain as a permanent condition. Strong fibrous bands and layers of newly formed tissue of great strength surround the parts in their new position, inter-

fere with the return circulation, and prevent the normal change of position which is required as the rectum or bladder fills and empties, or as the person moves about, coughs, sneezes, and the like. The appendix may be caught and pinned down within this area of chronic peritoneal inflammation, and at the same time small masses of cheesy pus in the tubes or lower peritoneal cavity serve as a focus for succeeding attacks, which continue indefinitely the disability. Expert knowledge and skill are required to recognize and properly appreciate many of the conditions referred to, while even under an anæsthetic adhesions of the pelvic viscera, if in the form of long bands, will often escape detection. It may be regarded as axiomatic that the replacement of the uterus, even if possible, will not produce relief of symptoms in the presence of adhesions or inflammation of tubes, ovaries, and broad ligaments. Inasmuch as the uterus has a tendency, when its position is altered by a force from without, to return to its original position, the elastic pressure exerted upon the pessary used will be likely to produce injurious results. And then, on the other hand, if the normal position be maintained, pressure and traction upon the diseased tissues near by will ultimately increase the distress of the patient. An uncomplicated backward displacement of the uterus, for example, is a comparatively rare condition, and, like other displacements, were it not accompanied by increase in the size of the organ, endometritis, salpingitis, chronic peritonitis, pelvic congestion, varicose veins of the broad ligament, and imperfect circulation in lymph channels, it would produce comparatively little disability. While, therefore, a displacement of the uterus may be the most easily demonstrated feature in a given case, it cannot be too strongly urged that attention must first be given to the correction of complicating conditions, and especially to the removal of all adhesions, before the replacement of the uterus by any form of support is to be undertaken. This preparatory treatment may occupy weeks, and may consist of hot douches, of elastic packing in the knee-chest position, of the application of absorbent tampons, as well as of the correction of unhygienic conditions of all sorts. In the event of failure of these efforts abdominal or vaginal section may even be required, especially where destructive tubal inflammation has occurred. Rapid replacement of the uterus under anæsthesia has been advocated in some cases, for example by Schultze. This should be attempted only in simple cases, and by one familiar with intra-abdominal operating, as it is easy to rekindle a slumbering pelvic peritonitis, produce hemorrhage by laceration, or distribute the infected contents of a tube. If undertaken, the operation should be done only by the hands, *i.e.*, by using bimanual manipulations, while the cervix may be steadied or moved in the proper direction with a tenaculum. Replacement by means of an intra-uterine instrument with a mechanical arrangement for changing the direction of its outer extremity is open to the objection that it may perforate the uterus or otherwise injure it, and that, when a difficulty of one kind or another is encountered, cautious intelligent action is impossible.

Downward Displacements.—The downward are usually combined with the backward displacements, and are those which carry in their train the greatest amount of physical discomfort, disability, and in some cases secondary disease. The degree may vary from a trifling descent of all the structures in the pelvic canal, including the uterus, to the complete extrusion of the organ from the body (Fig. 4903). The uterus in its descent is usually accompanied by the bladder and the anterior wall of the rectum, which undergo stretching; the walls of the vagina are also stretched, as are the connective tissues and the fascial supports of the pelvic floor. In the greater degrees of downward displacement, known as procidentia uteri, very elaborate changes of structure and of anatomical relations have taken place, and cases vary greatly in the individual changes of relation which have occurred. Sometimes the uterine body escapes from the pelvic outlet and the fundus may be defined in the upper portion

of the protruding mass, while no great change has occurred in the size or shape of the uterus or of its cervical segment. In these rare cases the protruding mass forms a true hernia. A considerable portion of the bladder,

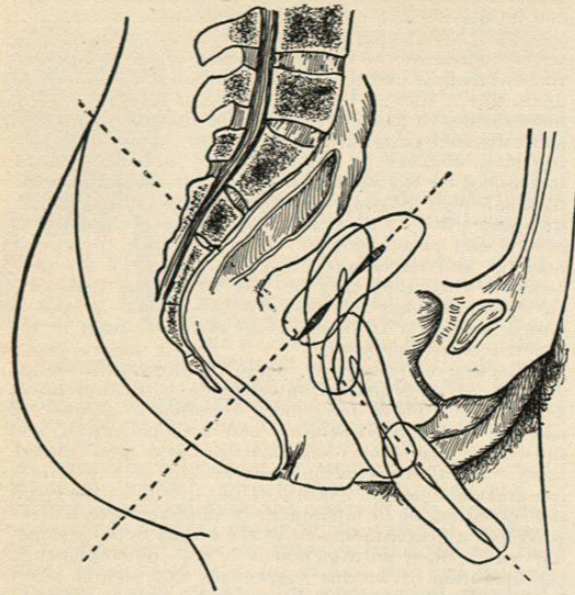


FIG. 4903.—Prolapse of Uterus. Diagram represents the degrees of prolapse, but not the usual distortion of the organ.

all of its base, all of the vaginal walls and urethra, the lower portions of the broad ligaments, part of the uterine tubes, several inches of rectal wall, the ovaries, with some small intestine or omentum, may be found in the mass. More frequently the fundus of the uterus remains in the lower portion of the pelvic outlet together with the tubes and the ovaries, while the central and cervical portions of the uterine body elongate downward and undergo hypertrophy (Fig. 4904). The result is a very great increase in the size and weight of the uterus, its canal measuring six or eight inches in length, and the cervical segment may be two or three inches in breadth. Hypertrophy of the vaginal mucous membrane and underlying connective tissue and passive congestion and œdema unite in the production of an external mass which may be five inches in diameter. In some instances urination can take place only after the protrusion has been manually replaced and the urethral canal thereby unbent. Secondary changes due to chafing and passive congestion may produce superficial inflammation and ulceration, so that more or less bleeding is quite common, even in cases which are seen in old age and which have not undergone cancerous degeneration. The imperfect emptying of the bladder may result in decomposition of residual urine and secondary bladder or kidney changes. Defecation is more or less interfered with and frequently requires manual assistance; impairment of the return flow of blood favors the development of hemorrhoidal conditions and other disorders of the rectum. Notwithstanding the enormous amount of displacement and distortion of the parts, patients, especially working women of the phlegmatic type, will sometimes complain of surprisingly little discomfort, and many women, supporting the parts with a tight napkin, will perform heavy manual labor and entirely refuse operative relief. In the extreme degrees of downward displacement, no form of instrument or apparatus proves satisfactory, as anything which gives sufficient support is more than likely to produce irritation or ulceration from direct pressure. It appears impossible to secure in the greatly widened and straightened pelvic outlet a proper point of support for any instrument. In the

minor degrees of this condition relief may be obtained sometimes for long periods by the use of the plain ring pessary, though each case requires an adaptation of the support to its peculiar conditions.

The operative relief of downward displacement has received much study, and many procedures have on protracted trial proved unsatisfactory. Removal of the uterus, occasionally advocated, does not restore the accompanying displacement of bladder, rectum, and vagina, and in well-marked cases of procidentia it has proved entirely unsatisfactory, unless followed by extensive plastic operations for the correction of the other elements in the condition and for the support of the other organs of the pelvis. Those procedures ultimately fail which do not succeed in restoring, to a large extent, the mechanical arrangement of supporting structures which originally maintained the uterus in position. All operations should aim at a restoration of the integrity of the pelvic floor, and particularly at repair of the torn fasciæ and separated fibres of the levator ani muscle. In addition to this the increased weight of the uterus must be corrected, its cervical segment, if elongated, must be shortened, and the utero-sacral attachments must be in effect restored in order to draw the cervix backward; and at the same time some operation must be carried out which will not only restore the normal forward position of the fundus, but will also, if possible, contribute to its support. In long-standing cases of procidentia the endometrium is usually diseased and hypertrophic glandular endometritis is commonly present. The first procedure to be undertaken, therefore, is curetting of the uterine cavity, and next the cervix is to be repaired if lacerated, or, if it is greatly elongated, the bladder and rectum are to be dissected off, the lateral blood supply of the uterus is to be ligated as in the early steps of a vaginal hysterectomy, and the lower portion of the uterus is to be amputated at such a point as will leave the organ approximately normal in length. This lessens the blood supply of the organ and tends to produce involution. When now the anterior and posterior flaps of the vagina are united to the flaps of the cervix by deeply placed radiating sutures, the deficient utero-sacral support is in effect supplied posteriorly, and the vagina and bladder are attached at a higher point on the anterior face of the uterus. An operation must now be performed that will diminish the cystocele. According to some methods a horseshoe-shaped denudation is made on the anterior vaginal wall and the edges of the denuded areas are united by rows of interrupted sutures. A preferable method includes free dissection of the anterior vaginal wall and its underlying connective tissue from the bladder over a triangular area whose base is directed toward the cervix, and whose width is determined by the degree of relaxation of the parts. The triangular flaps thus formed to the right and left of a median longitudinal incision on the most prominent portion of the cystocele are freely cut away; after which a series of buried superimposed catgut sutures is introduced to close the wound, and a superficial layer of continuous silk suture unites the cut edges of the mucous membrane and of the fascia beneath. This operation restores, better than can be accomplished in any other way, the integrity of the structures which normally support the bladder and anterior wall of the vagina.

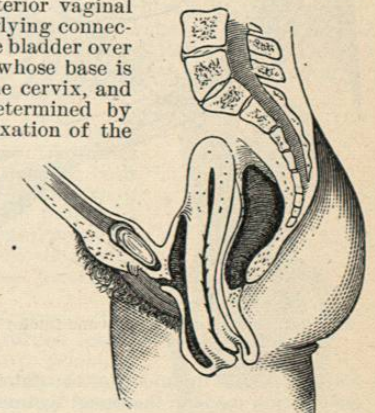


FIG. 4904.—Procidentia Uteri. Hypertrophy of supravaginal portion of cervix.