recovery followed. The diagnosis in this case was fairly well established but could not be confirmed by the x-ray, as its use had not been discovered at that time, about eighteen years ago.

DR. ALEXANDER LAMBERT, New York: Some years ago I had a case that puzzled me very much. The lesion turned out to be a sarcoma which grew at the junction of the vena azygos major and the superior vena cava. The pressure symptoms were peculiar. When the patient was lying down he became blue from the clavicle up, the color of the rest of the body remaining normal; but when the patient sat up his face was white and he became blue from the clavicle to the hips. Whether lying down or sitting up the legs remained normal all the time. This tumor acted no doubt as a sort of ball valve. The diagnosis was made by working out the circulation of the chest wall. A primary sarcoma of the right ventricle of the heart was the original lesion. I have seen a number of mediastinal tumors at Bellevue Hospital, and what struck me as most interesting was that the symptoms came on paroxysmally, with a cough sometimes like that of whooping cough and without any apparent reason or cause of excitation. The pain and dyspnea came on paroxysmally. One symptom on which some stress was laid by the old English writers is occlusion of the right innominate vein—pathognomonic of mediastinal tumors. This does not occur in aneurism.

DR. ROBERT H. BABCOCK, Chicago: It was my fortune last summer to see a case of mediastinal tumor, the antemortem diagnosis of which was substantiated post mortem. The patient had been treated for pulmonary tuberculosis. This illustrates the fact that a physician may mistake for pulmonary tuberculosis a disease which produces a definite tumefaction of the front of the chest. It had been suggested to me, even before I saw the patient, that consumption might be present; but when I laid my hands on the front of the chest it was clear to me that this was not a case of pulmonary tuberculosis. Instead of a depression of the chest, a characteristic of the phthisical habitus, the upper portion of the chest was distinctly bulging, showing intrathoracic pressure.

Another interesting phase of the case was that the patient had been given mercury for syphilis for a long time. Certain sores in the mouth were thought to be mucous patches. The antisyphilitic treatment was pushed to the limit, but without benefit to the patient. A careful investigation of the history of this case revealed the fact that these sores were due to the mercury. This case was very instructive to me, because it showed conclusively the necessity of the physician entering carefully into the history of the case, and also the necessity of a clear discrimination between the symptoms of the various intrathoracic diseases, since if a diagnosis of intrathoracic disease is to be made, one should bear in mind the fact that it can not always be made by the physical signs alone.

DR. JOHN FRANCIS HERRICK, Ottumwa, Iowa: The diagnosis in these cases is very important. I have seen a case of aneurism of the posterior wall of the aorta in which the entire cavity of the aneurism was filled with a solid mass of fibrin before the patient was first seen. There was only a small opening through which the blood got to the aorta and left subclavian. The case appeared much like a tumor of the mediastinum, with pressure on the aorta. There was an absence of bruit. No information could be obtained from the history of the case. The diagnosis of a solid tumor was made, but an old aneurism, with its cavity filled with a solid mass of fibrin, was found at the postmortem.

DR. FRANK SMITHIES, Ann Arbor, Mich.: I am not quite certain whether my first case did not present quite as many symptoms of the Vaquez-Osler malady as it did of intrathoracic pressure. It becomes very interesting to consider the possibility of the blood changes being secondary to the long-continued intrathoracic pressure, with consequent hyperplasia of the bone marrow. Dr. Lambert's remarks about the paroxysmal character of the symptoms of mediastinal growths are interesting. With regard to the first case reported, the pupils were equal and active under ordinary conditions. During the paroxysmal attacks of dyspnea the right pupil became distinctly dilated, showing a certain involvement of the sympathetic. Mediastinal tumors probably might be differentiated ante mortem by radiograms.

NON-SURGICAL TREATMENT OF UTERINE DISPLACEMENTS.*

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Operative gynecologic surgery has made such strides during the past few years that the practice of minor gynecology has been almost lost sight of. This fact becomes evident when one notes the number of surgical contributions to the relief of uterine displacements and the scarcity of contributions that deal with non-surgical treatment. And it is made still more evident when one converses with recent graduates in medicine, who know practically nothing about mechanical methods of correcting displacements, and who speak as if such therapeutic measures had passed into oblivion.

This condition is undoubtedly due to the advance that has been made in gynecologic surgery, which cures the displacements of the uterus much more rapidly and far more certainly; but we should remember that there are some patients who object to being operated on, and others whose physical condition makes operation unsafe (as, for instance, patients with exophthalmic goiter, with diabetes mellitus, etc.), in many of whom properly adjusted mechanical support will entirely relieve the symptoms caused by a displaced uterus. Moreover, we should remember that no operation is entirely free from risk. If we can in a given case achieve the desired symptomatic result by an entirely safe method, then it should be for the patient to decide whether she prefers the palliative measure, with a possibility of permanent cure and without any of the risk entailed by surgical intervention, or the operation with its attendant risk, resulting almost certainly in cure without the necessity of wearing a pessary.

I do not think it can be disputed that in some instances it requires more skill to adjust a pessary properly than it does to do a simple abdominal operation, since the former requires good judgment and more experience than can be gained in the one or two lectures that students get on this subject in colleges.

The normal position of the uterus varies with the condition of the bladder and the rectum; both being empty, the uterus is in anteversion with flexion. It is freely movable and changes its position according to the degree of distention of the bladder and rectum. We thus see that the uterus may become retrodisplaced or retroverted under certain physiologic conditions; but this is not a pathologic displacement, and it does not become such unless the uterus permanently remains in retrodisplacement. Before B. S. Schultze's classical publication on the pathology and therapeutics of uterine displacements, the perfectly physiologic anteversion of the uterus was considered by most gynecologists to be a pathologic condition, and hence women were unnecessarily subjected to treatment with a pessary, the kinds of which in those days were very numerous.

The displacements which are most frequently amenable to treatment by mechanical supports are of two kinds—posterior displacements, and descensus of the uterus, either with or without more or less descensus of the vagina.

In posterior displacements the rectouterine ligaments have lost their tone and are longer than normal; if a pessary be adjusted properly, they are made so tense that they bring the cervix backward toward the posterior

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pelvic wall, and thus the body of the uterus is placed in ante-position; provided no pathologic process has caused a thinning out (an atrophy) at the juncture of the cervix with the body of the uterus, as in some instances of extreme retroflexion of long standing. The round ligaments, which are elongated in such cases, are relieved of the weight and get an opportunity to regain their normal condition. Thus, I believe, these patients are sometimes entirely cured of the displacement.

The posterior displacements may be divided into (1) retro-position, (2) retroversion, and (3) retroflexion, in each of which varying degrees of displacement exist. Retroversion usually coexists with retroflexion. It is also commonly found that a retroversion is associated with more or less descensus of the uterus.

Retropositions of the uterus are not likely to cause any symptoms. In these the ante-flexed form of the body of the uterus is retained. The organ as a whole is simply situated farther back toward the sacrum than usual.

With retroversions there is associated more or less induration of the uterine walls, which is most marked at the junction of the body with the cervix. When the induration passes off, the body of the uterus will by its gravity become flexed to a greater or less degree, thus changing into a retroversion with flexion. In some cases of retroflexion, the flexion angle becomes, very acute, so that the uterine body may be below the level of the external os. Again, in some instances of long-standing retroflexion, the junction between the body and the cervix may become so atrophied that no pessary can hold the uterus ante-posed, the body invariably tipping over the upper bar of the supporter.

The majority of retroversions and retroflexions are acquired; in these cases treatment is more productive of good results than in those of congenital origin. Furthermore, it is the cases of acquired displacement that give rise to symptoms. Congenital cases do not often cause symptoms, and when they do, the displacement is seldom found amenable to treatment with pessaries. In a patient with a congenital retroflexion, the uterus is somewhat smaller than normal, and is not fully developed. Frequently the vagina is too short and too small in caliber to admit the adjustment of a pessary; and on the anterior vaginal wall, in the median line, is found a very fine band-like condition, associated with extreme tensility and density of the exterior cervical connective tissue, so that even should we succeed in ante-posing such a uterus, the ante-position will be only temporary, and the uterus will soon again assume its pathologic position. This condition may be considered as one of the causes of sterility.

Retrodisplacements which are fixed by inflammatory adhesions are not suitable for treatment by pessaries, nor is such treatment indicated in any case complicated by an acute inflammation of any part of the pelvic structures or of the pelvic contents. In all such cases the inflammation must first be cured.

A pessary should never under any circumstances be adjusted before the uterus has been placed into physiologic ante-flexion. If this can not be done, the treatment is not suitable to the condition. The replacement should be effected by bimanual manipulation. Only in exceptional instances, and then with the utmost anti-septic precautions, may a sound be used as an aid—as in treating very corpulent women and those with very rigid abdominal parietes, but then only if we have ascertained that no inflammatory process is present in the uterine annexa or the pelvic peritoneum. The object of

a pessary is to hold the displaced uterus in position after the displacement has been corrected, by making tense the folds of Douglas and thus bringing the cervix backward toward the posterior pelvic wall. The tension on the round ligaments is then relieved, and they have an opportunity to regain their normal tone and to exercise again their functions as the anterior supporting ligaments of the uterus.

Some instances of retroversion with flexion are relieved by the adjustment of a pessary, even if the pessary does not hold the uterus in ante-position, but simply brings it on a higher plane in the pelvis. It has seemed to me that this relief is brought about by correcting faulty circulation in the pelvic organs, which again was caused by the backward displacement with more or less descensus of the uterus.

In instances of pregnancy with retroflexed uterus, I usually make use of the knee-chest position for the purpose of reducing the displaced organ, unless I readily succeed in replacing it in Sims' position. One gets much aid in the air-pressure in the knee-chest position, and is more easily enabled to sweep the gravid uterus past the sacroiliac synchondrosis. When the organ has been reduced, a proper sized pessary should at once be adjusted.

If the physician is specially trained in the method devised by the late Thure Brandt, and has the time and the patience, and if the patient is willing to undergo such a course of treatment, very much may be accomplished with it. It is particularly to be recommended when the uterus is fixed by adhesions, more especially old puerperal adhesions. It should be avoided in all cases of salpingitis, especially of gonorrheal origin. Although I have studied the method and have used it extensively, I consider it too time-consuming for a busy physician to practice it. Furthermore, in simple displacements the results of this method are no more satisfactory, in some cases than other therapeutic measures at our command. I have seen the late Thure Brandt and his former pupil, Oscar Nissen, accomplish astonishing results in instances of fixed retroflexions, if the fixation was the result of puerperal inflammatory conditions and if the uterus was held in faulty position by old cicatrices; but I confess that, while I was able to achieve similar results, thanks to the instruction that was given me by these gentlemen twenty years ago, I found that the method required too much time.

The retroflexions most amenable to permanent cure by pessaries are those of recent postpuerperal origin. Hence the importance of an accoucheur's regularly examining his patients about a month after confinement. Such a displacement can be most easily reduced (provided there are no adhesions) by pushing up the fundus in the posterior cul-de-sac with the index and middle finger, while with the thumb the cervix is sharply depressed at the vaginal junction toward the hollow of the sacrum, and the fingers of the external hand are being brought with a firm rotatory motion behind the fundus, which is being pushed toward the anterior parietes with the vaginal fingers. When the fingers of the external hand are behind the fundus, this can readily be ante-posed. By making pressure with the thigh against the elbow of the intravaginal fingers, the foot having been placed on a stool, the replacement is accomplished with less exertion. If the vagina is too narrow to admit the two fingers and thumb, the forefinger should depress the cervix, while the middle finger pushes the fundus upward in the retrouterine space.

Another method which may sometimes be used with

advantage is that devised by Kuestner. In this method either the anterior or posterior lip of the vaginal portion of the cervix is grasped with a pair of tenaculum forceps, and is pulled in the axis of the vagina toward the vaginal outlet, which action stretches the cervix and brings the fundus nearer to the external hand so that it can be grasped by it and anteposed.

As soon as the displaced uterus has been properly reduced, a pessary should be adjusted. Care must be exercised in the selection of the pessary, that it be not too small or too large, and that it does not cause pressure on the soft parts. The patient should not be aware that a foreign body is in the genital tract, but the pessary must be of such size and shape as to hold the uterus in place. The pessaries best adapted to this are the Albert Smith and Thomas' pessaries. If the pessary has not the proper shape for the individual case, this can readily be given to it by proper molding, which is done by anointing the pessary with vaseline and moving it rapidly to and fro over the flame of an alcohol lamp until the rubber is heated so that it may be molded to the desired shape, when it is immediately set in shape by immersion in cold water.

After the adjustment, the patient should be allowed to walk about for a while and then be re-examined to determine if the pessary retains the uterus in position. The examination should be repeated a day or two later, to ascertain whether the uterus is held in position and the pessary is of the proper size and shape. A physician who is experienced will generally be able to make the proper selection of the pessary on the first attempt. While wearing a pessary the patient should use a vaginal douche daily, either of plain water or of a saline solution, even during menstruation. A pessary that has been properly fitted need not be looked after more than once in five or six months. It is advisable, when the patient asks how long the supporter must be worn, to tell her at least from two to five years; this being about the time that is necessary for a permanent cure of a displacement by a pessary, when such cure is possible. It will be found that from 20 to 25 per cent. of uncomplicated mobile backward displacements of the uterus can be permanently cured by such therapeutic measures.

I have so far considered only mobile backward displacements. There are some instances of backward displacements with light adhesions that are also amenable to treatment without the use of the knife. Allusion has been made to the Thure Brandt massage method, but because of the patience required to obtain good results with it, it was not further considered. Schultze devised a more rapid method of breaking up such light adhesions in one sitting under anesthesia. If no marked tubal complication is present, it may be tried, and occasionally I have been successful with it. The method employed is somewhat similar to that already described for replacing the mobile uterus bimanually, with this difference, that the middle finger is introduced per rectum, the fore finger and thumb per vaginam, and the adhesions are then forcibly broken up. If this method is successful, and the uterus has been anteposed, a pessary should be adjusted immediately, with an observance of the rules mentioned for mobile displacements. But, to repeat, serious tubal complications must be excluded before attempting this method.

Pessary treatment for the relief of acquired pathologic anteversions and antelexions is practically useless, except for the relief of the vesical tenesmus, which sometimes accompanies these conditions. Of all forms of

pessary which have been designed for anterior displacements, there is only one which in my opinion meets the requirements, that devised by Dr. Eugene Gehrung and known as the "Gehrung pessary." This pessary may also be used advantageously in mild degrees of descensus of the uterus and of the vagina. While I have never seen any case actually cured by it, most patients can be relieved more or less of the bearing down feeling of which they so frequently complain. The lower bar of this horseshoe-shaped pessary rests near the posterior border of the symphysis and elevates the protruding anterior vaginal wall and to some extent also the uterus. In Gehrung's hands it has proved satisfactory, even in marked degrees of prolapsus of the uterus and vagina. I have used it only as a palliative measure until the patient would consent to an operation, because I have not been successful in giving such patients permanent relief.

Congenital antelexions, in which the cervix is nearly always retroverted, are dependent to a great extent on a marked shortening of the recto-uterine ligaments. Frequently a posterior perimetritis is associated with these cases. Pessary treatment is useless for such patients, so far as my observation goes.

My object in selecting this subject for discussion was to emphasize the fact that there are other therapeutic measures in gynecology than the use of the knife and scissors; and to recall from apparent abandonment a measure that in some cases secures important beneficial results.

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DISCUSSION.

DR. C. LESTER HALL, Kansas City, Mo.: The pessary has its place in cases of uterine displacement. I have used it for many years with a fair degree of success, but I find that in a great many cases it is harmful. I do not agree with Dr. Boldt, that it should be used in cases of suspected adhesions and of pathologic conditions in the adnexa. I believe that the method of tearing up adhesions is a dangerous one. But in a case in which there are no adhesions, and the woman desires to become a mother, I believe that the pessary can be used with marked advantage and possibly with permanent cure. In reference to putting the uterus in position before the insertion of the pessary, I do not believe that in many cases of fleshy abdomen it is possible for any man to tell positively whether the uterus is in proper position without the use of the intrauterine sound. By placing the patient in the knee-chest position, using the sound as a fulcrum, and with the Sims speculum retracting the perineum, I believe that it is possible to tell when one does or does not get the uterus in proper position. I do not believe that an ordinary sound should be used, but an instrument much like the Miller dilator or the male urethral sound properly shaped. Many of these cases of young women are too early consigned to operative procedure. I have under my care a young married woman who had in her girlhood a retrodisplacement of the uterus and who continues to have it after each confinement unless I treat her by the postural method and as involution takes place see that the uterus is in proper position. I believe that the best cure for retrodisplacement outside of surgical procedure is pregnancy.

DR. GEORGE GELHORN, St. Louis: It is difficult to realize that gynecology at the present day consists of anything else but surgery. There are two points in Dr. Boldt's paper which should be emphasized because of their extreme importance. The first is that there are some men, both here and abroad, who assert that movable retroflexions do not cause any symptoms and consequently need no treatment. I am aware that such symptomless cases do exist, but they are comparatively rare and usually congenital. The overwhelming majority of acquired retroflexions, however, produce symptoms, sometimes only in remote parts of the body, and I am more than ever

convinced that these cases require treatment. Movable retroflexion very often acts as an *agent provocateur* of neurasthenia; if you only correct the uterine displacement and dismiss the patient without further attention, her neurasthenia which may have become independent will not receive permanent relief. It is necessary to treat also the neurasthenic symptoms of your patient, but you can not cure her neurasthenia unless you first relieve the exciting cause, viz: the retroflexion. As to the second point I heartily agree with Dr. Boldt that the proper treatment for uncomplicated movable retroflexion is the pessary. There appear in literature every now and then severe criticisms of the efficacy of the pessary, but to my mind such statements are acknowledgments of one's unfamiliarity with the possibilities of the pessary and the correct mode of its adjustment. With growing experience the number of irreducible uteri is markedly diminished. Should other means of replacing fail, the pressure weight method of Funke and Halban should be tried. The patient being in the Trendelenburg position, an empty rubber bag is placed in the vagina behind the cervix and then filled up with metallic mercury. If the uterus be movable at all, it will almost invariably glide past the promontory into its proper place and can now be held in position by means of a pessary. The intrauterine sound, on the other hand, which was advocated by the last speaker, carries with it the danger of perforation.

DR. ALBERT GOLDSPOHN, Chicago: The great evils which did occur in conjunction with pessaries, and therefore led the profession to exclude them from use, were not due to the pessary, but to the ignorant use, the abuse of the pessary in introducing it as if it were a lever or a jackscrew to raise something. Dr. Boldt properly called attention to the fact that the pessary must not be used unless the uterus is in normal position, and that that normal position must be secured by bimanual palpation, not by intrauterine instrumentation. This implies that the man who is able to restore a uterus by bimanual palpation will probably also recognize complications that would contraindicate its use. But I should like to call attention to one error that I think Dr. Boldt makes in declaring that if the uterus is held in normal position, in two to five years the round ligaments will in 20 per cent. of patients recover their normal shortness and then continue to hold that uterus. That is entirely the contrary of my own observation, and I have for at least fifteen or twenty years never had less than thirty patients with pessaries to look after. I can cite case on case of women who, on account of their aversion to surgery and because they had nothing but simple displacements, were treated by me with pessaries. The round ligaments of the uterus stretch and we might think that by the relief of tension they would retract, but that conclusion is not warranted. There is a period of grace, however, for the round ligaments, and that is shortly after labor when the element of involution is yet on the uterus and its appendages. If three or four weeks after labor the physician will examine his patient, and, finding a retroversion, will bring the uterus into anteversion by having the patient assume the knee-chest posture and by intelligent bimanual manipulation, and will then fit a pessary to hold that heavy uterus there assisted by the knee-chest posture assumed two or three times in the twenty-four hours, he will meet with success. He will find it difficult at first and will have to examine and make readjustments frequently until the uterus becomes lighter; but if it be kept in anteversion successfully all the time, by such care on the part of both the doctor and the patient for about a year and the pessary be then removed, the displacement will be cured in the majority of the cases.

DR. BERTHA VAN HOUSEN, Chicago: I have treated cases of downward displacement of the uterus successfully by the employment of a series of glass globe pessaries. This method is not especially useful in cases in which there is almost no muscular tissue in the perineum. The only time when the patient will have any difficulty is when she goes to stool. Any pessary that will remain in while the patient is standing or walking will be large enough. After the pessary is worn for a couple of months there will be difficulty in removing it, and the fingers will have to be placed in the rectum, probably causing an abrasion of the vaginal mucosa. When this pessary is re-

moved a smaller size should be inserted to be worn for two or three months. After wearing this there will again be difficulty in its removal, and a still smaller size is then inserted. In two to eight years you will be able to let that patient go without any pessary at all. By this method you are simply taking advantage of the natural atrophy that is going on. Any patient who is over 50 who has some muscular tissue in the perineum and has patience can be treated in this way very successfully. Sometimes there is atrophy in the cul-de-sac of Douglas which will make it almost impossible to retain the glass pessary, and it is contraindicated here. I have applied the glass globe in cases in which the vagina had a large ulcerated surface and when the pessary was removed the surfaces had completely healed and the pessary had caused no irritation.

DR. A. ERNEST GALLANT, New York: In some cases I have been surprised, when the patient returned, to find that the pessary had turned "end for end." A careful study of the pessary and these cases convinced me that the usual plan of introduction was wrong. The smaller end of the pessary is like a wedge, and it is so rounded that when that end is placed downward it slips from under the symphysis and out through the vulva whenever any pressure from above forces it down. On the other hand, with the small end uppermost, the cervix rests in perfect adjustment and does not wobble, the broad end under the symphysis lifts the floor of the bladder, and no amount of force can dislodge it, unless the perineum is torn or the pessary is not of a proper size. I have introduced the pessary in this way many thousands of times and it certainly fits better and holds the uterus in good position.

DR. FRANK HINCHEY, St. Louis: I think that Dr. Goldspohn is right in taking issue with Dr. Boldt in regard to the function of the round ligaments, but he gives no explanation of this theory. I think that we are wrong in placing any reliance on the round ligaments for acting as a support to the uterus in any way, either in holding it forward or having any effect on it when it is backward. I believe that the round ligaments are relics of the quadrupedal stage, when their purpose was to prevent the heavy, pregnant uterus from pitching forward when the animal was leaping. In the human being, however, there is no use for them. This is well shown by the fact that all operations for replacement of the uterus by shortening of the round ligaments are useless unless the pelvic floor is perfectly repaired.

DR. W. O. HENRY, Omaha: I believe that the general practitioner will find it better to put the patient in the knee-chest position, get the uterus back in its place and then insert the pessary. It can be done much better in this way than by lifting the uterus up, with the patient in the dorsal position. I do not believe it wise to use injections of any kind during menstruation. I believe that Schultz's method of treating a misplaced uterus bound down by adhesions is always wrong, and I object to that procedure entirely. I think that we are working in the dark and should never subject a patient to the tearing up of these adhesions under an anesthetic unless the work is done under the eye.

DR. H. J. BOLDT, New York: I have never seen cases of forward displacement with descent of the uterus cured by mechanical support. The percentage of patients cured in the cases I have mentioned was taken at random. I know that a certain proportion are cured and I take it that from 20 to 25 per cent. of those patients wear a support from two to five years. No one should think of introducing a pessary as Dr. Hall suggests, with the uterus fixed by adhesions. In regard to Dr. Henry's remarks I have seen good results in a few instances, but personally I am not in favor of the method.

Study of Pediatrics.—Caille, in the *Archives of Pediatrics*, states that the broadening influence of pediatric study has not been sufficiently emphasized and is probably underrated, but must be conceded as we realize how thoroughly the practice in diseases of children brings us into close touch with almost every other special line of medical work, including general surgery, the eye, ear, nose and throat specialties, orthopedics, skin diseases, etc.