An Address ON THE TREATMENT OF MOBILE BACKWARD DISPLACEMENT OF THE UTERUS.

DELIVERED TO THE NORTH OF ENGLAND OBSTETRICAL AND
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BY

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THE chief aim of a society such as ours is the encouragement of research and the enlargement of knowledge in our special department. But I think it is advisable from time to time to review opinions which seem to have become more or less established and to subject them to criticism inspired by a healthy scepticism. It is for this reason that I am asking the members of the society to give me their individual opinions on the treatment of retroversion in general, and in particular on fixation and suspension operations in cases of mobile retroversion.

I need not conceal from you at the outset that it is a subject on which I hold very strong views, and that these are not the views of the majority of gynaecologists all over the world. But I believe that the general opinion is based on a false pathology, and that, apart from a few exceptional cases, these operations are unnecessary, and in many cases distinctly harmful. A good deal of what I have to say is not new, but was contained in a paper communicated by Dr. Fletcher Shaw and myself to the Royal Society of Medicine in 1910.

The Significance of Backward Displacement.

Before we can profitably discuss the question of treatment we are bound to give some attention to the problem that lies at the back of all treatment—namely, the problem of what is the real significance of backward displacement. There is no subject in gynaecology in which there is more confusion. We have only to refer to the accounts of the symptoms as described in the modern textbooks to find much divergence of view. It is many years since Matthews Duncan wrote in this connexion, "The subject is surrounded in a mist, and I do not myself know the straight and scientific road to the clean and sweet drops of truth." But he had one clear conviction which he lays down as a definite proposition: "a retroverted, a retroflected, or anteverted or antelected, or a laterally displaced womb does not cause any pain or disorder or disability. Thousands of blooming, happy, fertile women have displacements." He admits that sometimes a retroversion is accompanied by symptoms, and under these he mentions "sacache, lower lumbar ache, aching in the hips or in the groins or in the thighs, feelings of bearing-down, bladder trouble, and rectal trouble. . . . All of these and more, or none at all, may be present." He makes no mention of menorrhagia or leucorrhoea, or dysmenorrhoea.

The Beginning of the Theory of Passive Congestion.

Some years before Duncan wrote these lines, John Williams had been puzzled by the association of dysmenorrhoea and retroflexion. He seemed to have come to the conclusion that dysmenorrhoea was more commonly found when the uterus was retroflexed than when it was antelected, and he formed a theory to explain this. He decided that the pain was due to congestion and that the cause of congestion in retroflexion was the constriction of the body of the uterus and of the veins in the broad ligaments by the sacro-uterine ligaments. He had no "ocular" proof until "Dr. Squarey brought him a uterus which was slightly retroflected. Posteriorly along the sides of the body of the uterus were distinctly seen the marks of these ligaments. The flexion was but slight and no parts of the broad ligaments had been drawn within the grasp of the constricting bands. Yet the marks of the bands on the body of the uterus unmistakably pointed out their constricting action." From this solitary *post-mortem* specimen sprang the congestion theory,

to widen out in its application in the course of years. At first it was only used in connexion with dysmenorrhoea associated with retroflexion, but now it is also brought forward as an explanation of menorrhagia and leucorrhoea. In other words, congestion is the cause of disordered uterine function.

Herman adopted this theory with enthusiasm, and embodied it in his textbook (1907). He wrote: "If the body of the uterus sinks between the sharp and firm utero-sacral ligaments, the veins in the broad ligaments are pressed against the sharp lateral boundaries of Douglas's pouch, and the return of blood through them is hindered and congestion of the body of the uterus is the result." He thinks this occurs in about one case in ten, and one gathers that the other nine have no symptoms.

Present-day Views.

Now let me refer to some of the modern textbooks—those that are in common use by students and which are written by men of high standing, and whose opinions therefore carry great weight.

Jellett says that "the symptoms caused by backward displacement are in the main due to the endometritis by which the condition is almost invariably accompanied."

Bland-Sutton and Giles distinguish between the symptoms of simple and complicated retroversion. In the simple variety the patient complains of a feeling of ill defined weight and fullness in the pelvis. "When complicated by pelvic inflammation the symptoms are: pain, severe dysmenorrhoea, irregular metrorrhagia, and abundant leucorrhoea."

Blair Bell avoids a description of the symptoms of retroversion, but states that "if the retroflexion and version are of long standing a state of affairs may occur which leads to interference with the venous circulation, with oedema of the endometrium and giving rise to menorrhagia."

Fothergill discusses the question more fully than most, and is definitely of opinion that "the twisting of the parametrium is in some cases a prime cause of uterine congestion." But he states that "there is nothing more difficult than to diagnose the exact relation of the retroversion to the symptoms and the other physical signs present in any particular case." In favour of operations performed with the view of keeping the uterus in anteversion, he states that, "in some cases the uterus becomes retroverted when left to itself, and when retroverted becomes congested sufficiently to cause symptoms."

Eden and Lockyer are more sceptical. They remark that "it is open to doubt whether backward displacement has any influence upon the uterine circulation." They mention the possibility of the utero-sacral ligaments exercising pressure and causing a broad ligament varix, but think this is "probably very rare." "Menorrhagia and leucorrhoea are the result of accompanying endometritis."

In the manual written by ten London teachers a good deal of space is devoted to the effects of backward displacements on the endometrium and muscle coats.

"There is no doubt," they say, "that the symptoms commonly complained of in acquired cases are the same as those of endometritis and uterine congestion generally," and therefore "it is necessary to demonstrate, if possible, how a retroverted uterus can develop endometritis or become congested."

There is interference with the venous return from the uterus. The fundus carries the broad ligaments with it and folds them over backwards. This involves some slight twisting of the vessels in the mesometrium, which tells on the veins only. The other view—"a very old" one, not so certain—is that the uterus is held down and incarcerated by the utero-sacral ligaments.

"There can be no doubt that long-continued congestion will lead to thickening of the endometrium and degeneracy of the muscle coat with increase of the fibrous stroma, consequently the endometritis and the so-called metritis may develop with their usual symptoms. The symptoms are backache, bearing-down, menorrhagia, dysmenorrhoea, sterility, leucorrhoea, and chronic left-sided pain. Menorrhagia and dysmenorrhoea are the direct result of congestion of the endometrium. Leucorrhoea is the result of cervical catarrh."

Chipman states that "complications of retroversion in the first instance assume the form of a passive congestion

the result of the impeded return of the venous blood." He seems to think that "rotation and pressure against the utero-ischia ligaments combine to cause this result." The results of this passive congestion are the production of chronic oedema, with hypertrophy and hyperplasia, both in the mucosa and fibro-muscular wall of the uterus. Webster states both views: that endometritis, so called, is antecedent to the displacement, and that it is caused by venous congestion; but gives no positive opinion. He remarks that the venous network is so rich that it is difficult to understand how a marked obstruction can be caused.

It will be seen that there is a wide difference amongst these authorities as to the symptoms of retroversion. Duncan believes that retroversion causes nothing more than discomfort or aching in the pelvis and abdomen. Bland-Sutton and Jellett think that the symptoms of disordered uterine function only occur when retroversion is complicated by pelvic inflammation. Webster mentions them, but gives no positive opinion as to their relation to retroversion. These authors, with Eden and Lockyer, may all be classified as sceptical of the theory that retroversion can act as a cause of menorrhagia, dysmenorrhoea, and leucorrhoea. Herman, Fothergill, Chipman, and the ten London teachers are out-and-out supporters of the theory that retroversion may be the cause of disordered function, and explain at some length the method in which it acts. It is all a question of congestion. Herman believed that it was all due to a nipping of the uterine veins by the sharp edges of the utero-sacral ligaments; Fothergill puts it down to the rotation of the uterine veins; Chipman thinks it is produced by a combination of these two conditions; while the ten London teachers are evidently disposed to reject the explanation of Williams and Herman and to regard the troubles as due to rotation. It may be noted that none of these authors give any proof of the congestion theory. There are many difficulties in the way of its acceptance.

Objections to the Passive Congestion Theory.

1. If the uterine veins are sufficiently compressed to cause venous congestion, one would expect the whole of the uterus, including the cervix, to be of a blue colour. Has anyone ever seen this in a case of retroversion? If so, he has remained strangely silent. I have for years tried to find it in every case of retroversion—by inspection of the cervix in all cases, and of the uterus whenever an abdominal operation has given the opportunity—and have failed.

2. The arrangement of the circulation in the broad ligaments is such as to make it very difficult to compress the venous return from the uterus.

3. There is no evidence of congestion in cases of bad prolapse, except when a greatly hypertrophied cervix has been nipped at the vaginal orifice. In procidentia it is not found, and yet this is the case of all others in which the veins are stretched to an extreme limit, and in which we would expect the blood return to be greatly hampered.

4. In cases in which a retroverted uterus has been removed no dilatation of the veins can be shown on microscopic examination. If the congestion theory be correct, we ought to be able to distinguish by the microscope a case of chronic metritis (or something like it) produced by retroversion and one associated with anteversion. If long-continued congestion leads to degeneracy of the muscle coat with increase of the fibrous stroma, it will show quite a different picture from the ordinary chronic metritis, in which both muscle and fibrous tissue are increased.

5. If the haemorrhage is due to venous obstruction we should expect to have a venous type of oozing, but the menorrhagia from a retroverted uterus differs in no respect from that of an anteverted one.

6. Even if we have haemorrhage caused in this way, how do we account for the leucorrhoea? Leucorrhoea must mean increased activity of the glands. Does passive congestion lead to hypertrophy or hyperplasia of the glandular element of the endometrium? If so, how? There is a link missing in the chain of the congestion argument. There is mostly silence on this point with some general allusion to oedema. But Chipman says that chronic oedema produces

hypertrophy and hyperplasia of the mucosa—in other words, that passive congestion causes overgrowth of normal tissues. The ten teachers are more cautious, and state that congestion leads to "thickening" of the endometrium. In another sentence they say that leucorrhoea is the result of cervical catarrh; but whether the cervical catarrh is due to venous congestion or is simply an incidental accompaniment of the retroversion they do not state.

7. The results of treatment form another objection to the theory, but these will be dealt with later.

The Relation of Disordered Uterine Function to Backward Displacement.

The symptoms of disordered function—namely, menorrhagia, leucorrhoea, and dysmenorrhoea—are the most common symptoms of chronic uterine disease. They are the symptoms—all or some of them—of what is called endometritis and chronic metritis, and occur more frequently in cases of anteversion than in cases of retroversion. Are we to give a different account of their origin according to the position of the uterus? Is it not more likely that they are produced in the same way, and that the position of the uterus has no say in their production? Further, is it not probable that the enlargement of the uterus, which is generally associated with endometritis and especially with chronic metritis, may be a principal predisposing cause of retroversion if the uterus is somewhat unstable in its equilibrium? In that case the sequence of events would be:

1. Endometritis or chronic metritis,* with disorders of function.
2. Enlargement of the uterus.
3. Backward displacement.

The congestion theory puts the sequence as:

1. Displacement of normal uterus.
2. Passive congestion.
3. Enlargement of uterus and disorders of function.

I have dealt at length with the question of the significance of retroversion, and to some it may seem to be of little practical importance. But the treatment adopted must follow the view taken of the pathology. If one believes that the *fons et origo* of all the symptoms mentioned is the backward displacement, then the logical result is to try and restore and keep the uterus in what is generally called a normal position. But a careful study of the evidence will, I think, force the conclusion that endometritis and metritis are not the results but rather the cause of—or at least merely complications of—retroversion.

There are other symptoms which have a better claim than those of disordered function to be regarded as produced by retroversion. I refer to the feeling of ill defined weight and fullness in the pelvis and of aching in the lower abdomen, especially in the iliac regions. These may be intensified (1) by the association of some degree of prolapse with the backward displacement, or (2) by increased weight of the uterus.

1. *Prolapse*.—It is not difficult to distinguish between simple retroversion and the retroversion which is found in the less severe cases of prolapse. In the former the cervix points more directly forwards and there is no descent of the upper part of the vagina; in the latter the cervix comes down in the axis of the pelvis and the body of the uterus is only moderately thrown back. The condition is primarily one of prolapse, and as such does not concern us in this discussion.

2. *Increased weight* may be due to hypertrophy of uterine tissues (endometrium or mesometrium) or to pregnancy of fibroid tumours. The two latter conditions are generally easily recognized. The enlargement which is found in chronic metritis may be considerable: it may be sufficient to cause incarceration of the uterus below the sacral promontory and so cause pressure on the pelvic veins (but not the uterine veins) or nerves, and even interfere with the functions of the bladder and rectum. It is in these cases that any rise in the intra-abdominal pressure, such as is caused by muscular effort or straining, may produce sudden acute symptoms of pelvic discomfort. Aching in the back is not a common feature except in cases of fixed retro-

* These terms are used simply as a matter of convenience. In the majority of cases it is probable that the changes are due to hypertrophy and have nothing to do with inflammation. I wish to emphasize this strongly, so as to avoid criticism that is concerned merely with words.

version, and then it is the result of old pelvic inflammation. This fixation of the uterus is another complication of retroversion which is outside of our discussion.

We may summarize the conclusions on the significance of retroversion we have so far arrived at as follows:

1. That complications are generally the only things that matter in retroversion, and not the displacement itself.
2. The complications are (a) endometritis and metritis; (b) prolapse; (c) increased weight; (d) adhesions.
3. None of these complications are produced by retroversion.
4. That in a certain number of cases a backward displacement seems to cause local pelvic discomfort and aching in the lower abdomen.

Varieties.

Some authors seem to lay great stress on the division of backward displacements into congenital and acquired—a division which seems to me of little practical importance. The so-called congenital forms are sometimes cases of malformation, and many of them are cases of maldevelopment. The most common form of maldevelopment is associated with an acute retroflexion, as the result of an area of weakness at the level of the internal os. This is more generally found in the acutely anteverted or coxleated uterus, but occasionally it gives rise to acute retroflexion. The cervix is generally of an infantile type. The symptoms are practically the same in both classes and their consideration is omitted from this paper.

It is quite likely that some retroversions in unmarried women are due to some defect in the pelvic floor, but the retroversion in this case is merely an early stage of prolapse.

TREATMENT.

There is complete agreement amongst all gynaecologists that backward displacement may exist without any symptoms at all. It is often discovered quite by accident. It is generally agreed that these cases require no treatment. It has never been suggested that treatment should be undertaken in order to prevent the displacement from producing changes in the uterus.

Whenever treatment is required it is on account of complications, and by far the most common complication is what I have called "disordered function." In my experience fully 90 per cent. of the patients with retroversion who consult a doctor do so because they suffer from menorrhagia, metrorrhagia, leucorrhoea, or dysmenorrhoea. They may have only one of these symptoms, but not uncommonly they have them all. I regard these cases as cases of endometritis or chronic metritis. The retroversion is a matter of no importance except in a very small minority of cases. The treatment, therefore, is that of chronic metritis, and this resolves itself into curetting in the great majority. A few may be treated on palliative lines, and a few may seem to justify hysterectomy.

Curetting.

The results of this operation in cases of endometritis associated with retroversion are very good. In the paper which Dr. Shaw and I communicated to the Obstetric Section of the Royal Society of Medicine in 1910 our statistics showed that the results were even better than in cases in which the uterus was anteverted. In 75 cases of retroversion improvement followed in 88 per cent.; while in 267 cases of all kinds 86 per cent. were improved.

I have recently investigated a fresh series of cases of retroversion complicated by disordered function which were treated by curetting only. The numbers are smaller than in the former series, but the details are more fully recorded. On the patient's first visit the reasons why she sought advice, as well as her symptoms, were all recorded. No leading questions were put. These notes, together with the records of the operations and the answers to written inquiries, furnish the facts upon which my conclusions are based. Many cases had to be omitted in which something more than curetting had been done—such as excision of a glandular cervix, or a plastic operation on the posterior vaginal wall.

The results are as follows: Thirty-eight cases were investigated, but of these 5 are incomplete, as no replies were received in answer to the written inquiries. Of the 33 completed cases 28 reported themselves as improved, while 5 stated that there was no improvement.

When the 5 failures were investigated the results were as follows: The first had another operation—nature not stated—a year after the curetting. The second was no better six months after operation; she had a pessary inserted then, became pregnant and had a miscarriage, and has had two children since. The third became pregnant eight months after operation and had a living child—her previous child having been born four and a half years before the operation. The fourth became pregnant five months after operation, having been sterile before the operation. The fifth became pregnant nineteen months after the operation, having been sterile up to that time and having suffered from dyspareunia.

Thus, in the 5 cases reported as failures, 4 have had pregnancies after curetting (one after the introduction of a pessary) and one has had another operation. If we eliminate the 3 cases in which pregnancy occurred without other treatment, it brings out the figures as 30 patients with 28 cases in which improvement is notified—a percentage of over 93. Of the 28 who were improved, 11 say that they are very much better and are satisfied with the result; 14 merely state that their condition is better; and 3 say they are slightly better. These cases are dealt with more fully in an appendix. I might point out that the mere report of the patient as to her improvement was not taken as sufficient; particulars were obtained as to each individual symptom before and after the treatment.

The treatment by curetting of a uterus which has the physical characteristics and the attendant symptoms of chronic endometritis seems such an obvious proceeding that one is at a loss to account for the fact that this treatment is not even mentioned in connexion with retroversion by some of the authors from whose textbooks I have already quoted, and by others it is given quite a subordinate place as a means of cure. Possibly the authors may take this treatment for granted, but the only inference one can draw from their silence is that they do not make use of it in cases of retroversion; that, after all, the displacement is the thing that matters to them and not the complications. Their rule seems to be to treat a case of chronic endometritis by curetting if the uterus is anteverted, but by pessaries or suspension if it is retroverted. In the light of my personal experience—and I think I may say of the experience of my colleagues—curetting is at least of as much value in one set of cases as in the other. There is this to be said for curetting: it is a safe operation in the class of cases under discussion, with reasonable precautions. The only trouble is that when it is done inefficiently, as I fear is not uncommonly the case, it may prove to be useless.

MECHANICAL TREATMENT.

1. By Pessaries.

In older textbooks the treatment by pessaries is the only treatment described, and many pages are still devoted to the methods by which displacements are corrected and pessaries are introduced. It was the main resource of the gynaecologist forty years ago, and is still very popular amongst practitioners of to-day. There is no doubt that in some few cases benefit follows the insertion of a pessary, but I am convinced that in most it is merely a faith cure, or cure by suggestion; otherwise the relief obtained would often seem inexplicable. It is sometimes found that a patient is going about quite happily with a small pessary which is much too short to exercise any pressure on the posterior fornix or any tension on the cervix. Sometimes one finds that the instrument has been inserted so that the upper bar lies in front of the cervix. Even more commonly one finds that an instrument of suitable size has been chosen and is in correct position, but the uterus is still retroverted and hangs backwards over the top of the pessary. One even finds cases in which the patient is quite happy in

the thought that a pessary is doing good after it has been removed for some time. To quote Matthews Duncan:

"It is not a simple matter to judge of the part played by a pessary in relieving or removing painful symptoms. You will find many patients, alarmed at the idea of having a displacement and believing the pessary undoes it or cures it, wear an instrument with satisfaction and even pleasure, although it gives them new pains or increases what they had before. Such patients live in the pleasing and sustaining delusion that the pessary is curing them and object to its removal, even when removal gives relief, although told that the pessary, when in, does not alter the condition of displacement."

But allowing for all this, there are undoubted cases in which the patient feels a real relief. Many of these are cases of prolapse with accompanying retroversion, and in these we can understand that the bearing-down sensation is relieved. There is, however, a residuum of cases in which there is no sign of prolapse, but the bimanual replacement of the uterus and its retention in a forward position do produce quite a remarkable improvement. What is the explanation? Why is it that the pressure of the body of the uterus in the pouch of Douglas should cause discomfort in some cases? It is not a question of increased weight or bulk, because we sometimes find it absent in cases of heavy retroversion and present in retroversion of an otherwise normal uterus. In a small proportion of cases the relief caused by pushing the uterus forward is undoubted. It seems to me to be due to some effect on the sympathetic nervous system. In exceptional cases a retroversion seems to be related to a neurasthenic condition. In these cases the patient complains not only of local discomfort, but of aching in the lumbar and dorsal spine, and even of occipital headache, all of which are removed or relieved by pessary treatment. This improvement is entirely a question of comfort. I have never heard or known of a case in which the insertion of a pessary has banished menorrhagia, leucorrhoea, or dysmenorrhoea, when these have been present before the instrument was employed.

This seems to be a suitable place for a few notes on the subject of retroversion and pregnancy. I think most of us hold the view that retroversion acts sometimes as a bar to pregnancy. We have all been consulted by young women who have been married for some months or years and have come to ascertain why there has been no pregnancy. An examination has revealed a retroversion. The introduction of a Hodge pessary after bimanual reposition seems in many of these cases to produce the desired effect. I think that we are also agreed as to retroversion being a predisposing cause of abortion. How it acts we do not know, but we are justified, in cases of early pregnancy in a retroverted uterus, in making use of a pessary for a time.

There is no doubt in my mind that pessaries are not nearly so commonly used as they were thirty years ago. The objections to their use are obvious. They must be objectionable to most patients with a properly developed sense of cleanliness, and frequent cleansing of a Hodge pessary means frequent visits to the doctor.

The cases in which pessary treatment, except as a temporary measure, is of real use form a very small minority, and in these it is better that the patient should have recourse to surgical methods, except in the rare cases in which operation is contraindicated by the general condition of the patient.

2. By Suspension.

It is not my intention to review all the various operations that have been devised with the object of retaining the uterus in a position of anteversion; their name is legion, and the amount of thought expended in devising satisfactory methods has been enormous. The literature must consist of many thousands of printed pages, and the number of these operations performed daily in all countries must be very large. Alexander's operation, ventro-fixation, ventro-suspension, Gilliam's operation and its modifications, and Webster's sling operation, all have their advocates, and each attaches much importance to some particular detail of technique. From the large number of cases reported, I am driven to the conclusion that to many operators the sole requirement for the operation is that there should be a backward displacement. Many, no doubt, believe that

when the uterus is elevated by pessary or stitches the symptoms of disordered function will disappear. There is not a vestige of proof for this statement. If it were true, the same treatment should be employed for heavy anteversion.

At a meeting of the British Medical Association some years ago one speaker said he was tired of arguments on this subject, and felt inclined to exclaim, "A plague on both your houses." In cases of retroversion he curetted first and then suspended the uterus. He evidently did not share in the sentiment of the Latin poet and philosopher who wrote "*Felix qui potuit rerum cognoscere causas*," and it did not occur to him that in many cases he might be subjecting his patient to unnecessary pain at the time, and to possible danger in the future. For, after all, an abdominal section should not be lightly undertaken. There is always a risk of intestinal obstruction after these operations, although the risk is no doubt small in the hands of experienced operators. But if every case were published in which there had been trouble or disaster as a result of these operations, I believe the result would astonish most of us. It is a pity that many of the operators cannot see the results of their handiwork some years later—the long thin bands that are the only evidence of a previous ventro-suspension, the intestinal adhesions, and the weak abdominal walls. Within the last few years I have operated on at least ten cases with the object of freeing adhesions, dividing bands, and attempting to cure ventral herniae—all as the result of previous suspension operations.

But, after all, it may be asked, Why, if these operations are not satisfactory in every way, are they performed with such frequency? Surely, it may be argued, the results must be good. The explanation seems to me to be threefold:

(1) The operations are done in such large numbers—many operators counting their cases by the hundred—that the only indication for the operation in many of the cases must be the displacement alone. It follows, therefore, that in these circumstances the patients are naturally none the worse for the operation unless things go wrong.

(2) Once any operation becomes the fashion, the critical faculty of the individual surgeon is apt to be suspended. The history of medicine gives many striking examples of this. In gynaecology we can remember the extraordinary vogue of pessaries and of tampons and swabbing with lotions in the treatment of out-patients; and of the removal of ovaries which we now know must have been more or less healthy. In general surgery we have heard of the extraordinary and far-reaching benefits which have been claimed for fixing the kidneys or for dividing intestinal kinks.

(3) The power of suggestion is great. I think the cure by faith and by suggestion is just as common after suspension operations as it is, or was, in pessary treatment. All women are upset when they are told they have a displacement, and naturally relieved when they are assured that the uterus is now in the right position. It may be objected that the element of suggestion may account for much of the success of curetting, but here it cannot come so powerfully into play. The displacement is still there after the operation, and no attempt has been made to reduce it.

I would ask those who are firm believers in suspension operations to tabulate the several indications for each operation. We ought to know in every case why it was done—what were the symptoms that seemed to call for it. Was it on account of backache or bearing-down sensations, or fullness in the pelvis, or interference with the functions of the bladder; or was it because the patient suffered from dysmenorrhoea or menorrhagia or leucorrhoea or dyspareunia or sterility or frequent abortions? In the subsequent history we should be informed as to the effect of the operation on each individual symptom.

I have now to admit that there are some few cases in which a suspension operation has to be done. The reasons are obscure, but the cases which are suitable are just those to which I referred in connexion with the use of pessaries. There are some cases in which all complications are got rid of and yet the patient finds that the retroversion is intolerable. I believe these cases are very few. In my own practice I have performed four ventro-fixations

in the last four years; and in all of these cases curetting had been tried in the first place.

I have little to say in regard to the different kinds of operation. My own preference is for ventro-suspension or suture of the anterior uterine wall—at a point just above the os externum—to the anterior abdominal wall without removal of its peritoneum. Actual fixation or fixing of the uterus to fascia seems to have quite gone out of fashion, except, perhaps, for prolapse. But the other varieties of operation all have their advocates. There is one that seems to me a striking example of misplaced ingenuity, and that is the operation known as "Webster's sling." It seems difficult to understand why men who hold the belief that the uterus may become the victim of congestion through a comparatively slight change of position should advocate an operation the result of which is to tie up the uterus in its own round ligaments. I think if the object were to try and produce a condition of passive uterine congestion by means of an operation that this method might be favourably considered.

My remarks have been concerned with the treatment of mobile retroversion. The application of suspension operations to prolapse, with or without retroversion, and to cases in which the uterus is adherent, do not come under discussion.

SUMMARY.

My views on the treatment of mobile backward displacement of the uterus may be summed up as follows:

1. The great majority of cases of retroversion in which treatment is required are cases in which the symptoms are mainly those of disturbed function. The treatment, therefore, is the same as for cases of chronic endometritis—namely, curetting. In a few cases where there is advanced chronic metritis hysterectomy is justifiable.

2. Pessary treatment is indicated as a temporary measure in some cases of sterility and of early pregnancy associated with retroversion. It may also be indicated in a small proportion of cases in which the backward displacement gives rise to discomfort, provided that for some reason the case is not suitable for operation or the patient refuses.

3. Suspension operations are no cure for symptoms of chronic endometritis; when these are present curetting is indicated.

4. In a small proportion of cases—probably not 10 per cent.—when the patient complains of pelvic discomfort or pain a suspension operation may be necessary; but only after curetting has been given a good trial.

BRIEF NOTES OF CASES.

The following is a list of questions which was sent to each patient:

1. Are your periods regular?
2. Do you lose less at the periods than before the operation?
3. Have you any pain at the periods?
4. Have you any aching in the lower part of the abdomen between the periods?
5. Have you any discharge (white or coloured) between the periods?
6. What in your opinion is the result of your operation: Is your condition better? Is your condition unchanged? Is your condition worse? If worse, please give particulars of your symptoms.

Case 1.—Nullipara, aged 31; married two years. Admitted to St. Mary's Hospital, Manchester, on account of dysmenorrhoea, leucorrhoea, and sterility. Operation, February, 1920. *Result:* "Distinctly better." Still some dysmenorrhoea; no leucorrhoea. Has had three children since operation.

Case 2.—Single woman, aged 23. Suffered from menorrhagia, leucorrhoea, and dysmenorrhoea. Operation at St. Mary's Hospital, April, 1920. *Result:* "Better." No menorrhagia; still some leucorrhoea and dysmenorrhoea. Married since operation.

Case 3.—Married woman, aged 29; two children; last confinement two years previously. Suffered from menorrhagia, leucorrhoea, and chronic abdominal pain. Operation, September, 1923, at nursing home. *Result:* "Better." No menorrhagia or leucorrhoea; still slight abdominal pain.

Case 4.—Nullipara, aged 26; married two years. Operation, December, 1921, at St. Mary's Hospital, on account of menorrhagia, leucorrhoea, chronic abdominal pain, and dyspareunia. *Result:* "Better." Still menorrhagia and some leucorrhoea; no abdominal

pain; no mention of dyspareunia. Improvement probably refers to dyspareunia and abdominal pain.

Case 5.—Married woman, aged 34; three children, youngest aged 5. Admitted to nursing home with profuse and irregular haemorrhage, and operated on in May, 1923. *Result:* "Great success." No menorrhagia.

Case 6.—Single woman, aged 21. Suffered from dysmenorrhoea, menorrhagia, and leucorrhoea, for which she underwent operation at a nursing home in February, 1922. *Result:* "Better." Less dysmenorrhoea, no menorrhagia, slight leucorrhoea.

Case 7.—Married woman, aged 31; one child aged 3. Admitted to St. Mary's Hospital on account of menorrhagia, dysmenorrhoea, leucorrhoea, and chronic abdominal pain. Operation, November, 1921. *Result:* "Better." No menorrhagia, very slight dysmenorrhoea, still leucorrhoea and some abdominal pain.

Case 8.—Married woman, aged 33; two children, youngest aged 6. Operated on in July, 1923, at St. Mary's Hospital, on account of menorrhagia and chronic abdominal pain. *Result:* "Better." No menorrhagia or abdominal pain.

Case 9.—Nullipara, aged 24; married nine months. Had acute dysmenorrhoea and chronic abdominal pain, for which she underwent operation at St. Mary's Hospital in August, 1921. *Result:* "Successful." Less dysmenorrhoea, no abdominal pain.

Case 10.—Nullipara, aged 34; married three years. Admitted to St. Mary's Hospital with menorrhagia and leucorrhoea. Operation, March, 1923. *Result:* "Slightly better." No menorrhagia, slight leucorrhoea. Small masses in pouch of Douglas (? adenomyomata).

Case 11.—Single woman, aged 26. Admitted to St. Mary's Hospital with dysmenorrhoea and leucorrhoea. Operation, April, 1921. *Result:* "Better." Less dysmenorrhoea, no leucorrhoea.

Case 12.—Nullipara, aged 36; married eight years. Admitted to St. Mary's Hospital with menorrhagia, and operated on in October, 1922. *Result:* "Much better." No menorrhagia. This patient was marked before operation as possibly suitable for ventro-suspension.

Case 13.—Single woman, aged 31. Suffered from dysmenorrhoea, leucorrhoea, and chronic abdominal pain. Operation at nursing home, July, 1922. *Result:* "Better." Less dysmenorrhoea, still leucorrhoea; some abdominal pain for five or six days. Cavity of uterus irregular (? small fibroids + 1½ inch).

Case 14.—Married woman, aged 35; two children, youngest aged 2. Operation at nursing home in June, 1922, on account of leucorrhoea and menorrhagia. *Result:* "Much better." Very little leucorrhoea, no menorrhagia.

Case 15.—Married woman, aged 31; nullipara. Admitted to St. Mary's Hospital with leucorrhoea and dysmenorrhoea, and operated on in April, 1922. *Result:* "Better." No leucorrhoea, still dysmenorrhoea. Before operation she was marked as possibly suitable for ventro-suspension.

Case 16.—Married woman, aged 28; one child, aged 8½ years. Operation at St. Mary's Hospital in July, 1922, on account of leucorrhoea and dysmenorrhoea. *Result:* "Better." Only occasional leucorrhoea, less dysmenorrhoea.

Case 17.—Single woman, aged 23. Suffered from acute dysmenorrhoea, leucorrhoea, and chronic abdominal pain. Operation at St. Mary's Hospital, May, 1923. *Result:* "Very beneficial." Very little pain at periods; no leucorrhoea, no abdominal pain. Patient had well marked cervical catarrh before operation.

Case 18.—Nullipara, aged 32; married two and a half years. Operation at St. Mary's Hospital, in February, 1921, on account of menorrhagia, leucorrhoea, and chronic abdominal pain. *Result:* "Slightly better." Symptoms still persist, but presumably less. There has been no pregnancy.

Case 19.—Nullipara, aged 32; married five years. Operation at St. Mary's Hospital, in March, 1923, on account of menorrhagia, dysmenorrhoea, and leucorrhoea. *Result:* "Better." No menorrhagia, still some dysmenorrhoea, very occasional leucorrhoea. Patient disappointed that there has been no pregnancy.

Case 20.—Nullipara, aged 26; married fifteen months. Suffered from menorrhagia and leucorrhoea. Operation at nursing home in January, 1921. *Result:* "Altogether satisfactory." No menorrhagia or leucorrhoea. Two children since operation.

Case 21.—Single woman, aged 24. Operation in nursing home, January, 1923, on account of dysmenorrhoea, leucorrhoea, and menorrhagia. *Result:* "Very much better." Very little pain, no menorrhagia or leucorrhoea. Patient had well marked cervical catarrh before operation.

Case 22.—Single woman, aged 22. Suffered from menorrhagia and chronic abdominal pain. Operation at St. Mary's Hospital in June, 1923. *Result:* "Considerably better." No menorrhagia or abdominal pain. Patient, at her first visit, was marked as possibly having an adherent uterus.

Case 23.—Single woman, aged 19. Operation in nursing home, July, 1923, because of dysmenorrhoea and leucorrhoea. *Result:* "Slightly better." Still dysmenorrhoea and leucorrhoea.

Case 24.—Single woman, aged 31. Had pain in right groin and hip, menorrhagia, and dysmenorrhoea. Operation at St. Mary's Hospital, March, 1922. *Result:* "Better." Now very seldom has abdominal pain; periods less; still dysmenorrhoea.

Case 25.—Married woman, aged 36; two children, youngest aged 3. Suffered from menorrhagia, leucorrhoea, dysmenorrhoea, and chronic abdominal pain. Operation at St. Mary's Hospital, February, 1924. *Result:* "Better." No menorrhagia, very slight leucorrhoea, slight dysmenorrhoea; still some aching in abdomen. Marked before operation as possibly suitable for ventro-suspension.

Case 26.—Married woman, aged 23; one child, aged 5 years. Suffered from chronic abdominal pain. Operation in July, 1923, at St. Mary's Hospital. *Result:* "Conditions perfect." No abdominal pain or menorrhagia.

Case 27.—Married woman, aged 40; two children, youngest aged 2 months. Operation in nursing home, March, 1921, on account of menorrhagia and chronic abdominal pain. *Result:* "Very much better for two years." No menorrhagia, abdominal pain less. Now has symptoms of climacteric.

Case 28.—Nullipara, aged 32; married nine years. Operation in nursing home, February, 1922, on account of dysmenorrhoea and leucorrhoea. *Result:* "Much better." Only occasional pain, no leucorrhoea. Pedunculate adenoma removed from uterine cavity by curette.

Case 29.—Married woman, aged 30; four children, youngest aged 18 months. Operation in nursing home, March, 1921, on account of menorrhagia and leucorrhoea. The result was not stated. Patient had to undergo another operation (details not given) in June, 1922. The only pain now is at the bottom of the back.

Case 30.—Woman, aged 24; married six months. Suffered from dysmenorrhoea and leucorrhoea, for which she underwent operation in a nursing home in December, 1920. *Result:* "No change." The reply refers to six months after operation. A pessary was then introduced, and pregnancy began six weeks later. Since then she has had one miscarriage and two confinements.

Case 31.—Married woman, aged 30; one child, aged 4½ years. Operation at St. Mary's Hospital in April, 1920, on account of menorrhagia, dysmenorrhoea, and leucorrhoea. *Result:* "No better." Still menorrhagia and leucorrhoea, not much dysmenorrhoea. Patient had another confinement two years after operation, and has been in bed for two months with "nervous prostration."

Case 32.—Nullipara, aged 19; married nine months. Was operated on for dysmenorrhoea, at St. Mary's Hospital in March, 1923. *Result:* "Unchanged." Still dysmenorrhoea and leucorrhoea. Patient was confined six months ago (March, 1924); she was pregnant three months after operation.

Case 33.—Woman, aged 30; married four months. Suffered from dysmenorrhoea, dyspareunia, and leucorrhoea, for which she underwent operation at St. Mary's Hospital in January, 1921. *Result:* "Unchanged." Still dysmenorrhoea and leucorrhoea. She was confined four months ago.

THE OPERATIVE TREATMENT OF KNEE FLEXION IN POLIOMYELITIS.*

BY

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I MUST apologize for bringing up a subject on which, to all intents and purposes, the last word has been spoken; but it so happens that within the last three years I have had fourteen cases under my care, in which the usual methods of continuous traction and wedge casts would appear to be insufficient, unless very protracted periods of time had been expended in such treatment.

With the limited number of hospital beds at my disposal and my very long waiting list, I felt that a quick method of deformity reduction was justifiable, and my experience has shown that such risks are negligible and that the deformity even in extreme cases is readily reduced within two or three days without circulatory interference. I may here add that, whatever vasomotor disturbances existed before operation, these were in no instance intensified. On looking up the standard works on orthopaedics I cannot find any definite instructions as to operative procedure: by one author we are advised to divide the hamstrings and by

another the tight structures, but as far as I can judge no standardized operation has been formulated.

At the Shropshire Orthopaedic Hospital I am told that at least an average of three months is required to straighten out bad cases, and even then subsequent operation may be required. It is obvious that all preventable deformities which follow poliomyelitis will become fewer and of less severity as orthopaedic after-care schemes become more general, but for the present I am afraid we shall meet with them from time to time.

In the cases under discussion three were bilateral and eleven unilateral; all displayed an extreme degree of paralysis, muscular power, if present, being represented solely by the ileo-psoas or the tensor fasciae femoris. None of the bilateral cases had attempted to walk since the onset of the disease, and two of the three cases had never walked. All the unilateral cases were "dangle legs," and walked either with two crutches or with one crutch on the affected side round which the withered and useless limb was crooked. Where the triple deformity of hip flexion, knee flexion, and talipes equino-varus existed, as in most of the cases, the knee condition was dealt with first; this was followed by a Soutter's operation where required, and finally reduction of the foot deformity with stabilization finished the operative sequence. The youngest case was 10 years old, with onset at a few months, and the oldest 41 years, with onset at the age of 7. Two other adults were over 35—one paralysed at 12 months, and another at 6 years. Twelve cases were of pure flexion; it is interesting to note that the degree of posterior tibial luxation is slight or absent in all paralytic cases unless one of the hamstrings escapes. Two cases had marked posterior luxation and external rotation of the tibia in consequence of the biceps alone retaining function.

The degree of flexion varied from 30 to 100 degrees, all measured during passive extension of the joint. The average deformity lay between 45 and 60 degrees. The longest paralytic history was thirty-six years; he had 100 degrees of flexion with marked luxation and external tibial rotation. In this case by open operation the deformity was very markedly reduced and I was able to perform an arthrodesis of the knee simultaneously without any undue removal of bone. This procedure, combined with foot stabilization, enabled him to walk very well with nothing but a surgical boot with 4 in. elevation. The shortest paralytic history was six years. In this case I am prepared to admit that with prolonged stretching an open operation might have been avoided, but where paralysis is so extensive that future tendon transplantation is out of the question, one is guided solely by the principle of surgical democracy. As is well known, forcible extension of a flexed knee by manipulation may be productive of a tibial luxation where this has not previously existed.

Operation.

The patient is turned on his face and a sandbag is placed beneath the lower third of the femur; an assistant holds the foot and steadies the limb, and produces extension of the knee when called upon to do so; no tourniquet is used. A vertical incision in the middle line of the posterior aspect of thigh and leg is carried from the mid-point of the thigh to the junction of the upper and middle thirds of the leg. The deep fascia is incised and is found to have undergone adaptive shortening, the skin is widely undercut, and a transverse incision is made through the fascia about the joint level. The muscles bounding the popliteal space are dissected from the large mass of fat which surrounds the popliteal vessels and nerves and which is found to extend down to the popliteal fascia and the popliteal surface of the femur. This mass of fat is very much more pronounced in these cases than in normal limbs. Where hamstring tendons are tight (11 cases) all should be divided, care being taken that the external popliteal nerve is freed from the inner surface of the biceps muscle at the point of section of the latter. The vessels and nerves are freed in the fat mass from the inner hamstrings and the inner head of the gastrocnemius; this can be done by sharp or blunt dissection, but I have found that the easiest method of separation is by means of gauze on the glove finger. Muscular branches to the inner head of the gastrocnemius and the superior and

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