immediately after delivery shows the difference between the firm, contracted, upper portion of the body, and the thinner, flabby, lower segment and cervix folded below it. This proposition is not only of scientific, but of practical importance; it has a wide bearing in pathology, for example, on rupture of the uterus and on placenta previa.

Look now at the third stage of labour in the light of this proposition. The lower segment, in its passiveness, is more allied to the cervix and vagina than to the active part of the uterus above it. The genital tract falls into two parts through a line corresponding to the upper end of the lower uterine segment (α in the woodcut). Above that line the muscular wall of the genital tract is able to force on a body lying in it, while, below, it is unable to do so.

Now for the practical bearing of this. The placenta can be driven out of the upper portion of the uterus by the action of the walls alone, that is, by the pains of the third stage. But once it has passed that line, some other force must operate—either increase of intra-abdominal pressure, gravity, or artificial interference.

(a) Increase of intra-abdominal pressure is the first force we think of. The pinch of snuff which the old wives gave to bring away the after-birth is quite sound treatment. It rests on this scientific basis: the placenta will be born (expelled from the lower segment, cervix, or vagina) by any action of the abdominal muscles which suddenly increases the intra-abdominal pressure, for example, the forced expiration of sneezing; and there is no more effective stimulant of the centre for sneezing than snuff. In fact, whatever makes the patient bear down favours the birth of the placenta. In this respect, the lower segment, cervix and vagina resemble the bladder after delivery, and an interesting parallel might be drawn between them. May not the difficulty of emptying the bladder *post-partum* be due, not, as is often said, to the removal of the weight of the pregnant uterus, which allows the bladder to expand, but to the removal of the volume of the pregnant uterus, which makes it more difficult for the elongated abdominal muscles to increase the intra-abdominal pressure sufficiently to force the urine out of the bladder? The change in intra-abdominal pressure by the substitution of a volume of ten cubic inches for one of eighty-three (I estimate the bulk roughly from two frozen sections I have made of the uterus at the commencement and at the completion of labour) is considerable, and its effect on the abdominal circulation and the action of the viscera is well worthy of study.

(b) Gravity will be brought into play by the patient's being made to sit up.

(c) Artificial interference belongs to the management of the third stage, which lies beyond our present paper. Will you just note in passing that the Dublin method assists the natural mode of expulsion; and the Credé one, also, in its two parts (first grasping the uterus antero-posteriorly, then pushing downwards in the axis of the pelvis) adapts itself to the two stages of expulsion, corresponding to the placenta being in the active or passive portions of the canal.

B. In what manner are the placenta and membranes expelled? Two views have been brought forward: one by Schultze, that it comes foetal surface first; the other by Matthews Duncan, that it comes edge first. There is no doubt that it comes out in both these ways. My own observations, recorded in the third pamphlet, make me believe that Duncan's way is the more frequent; but we must remember that the presence of the hand in the uterus will favour that mode. Champneys has recently made a much more extensive series of observations on this point; and his tables show that in 85 per cent. (59 out of 69) the presenting part was either the edge or within two inches of it.

5. What is the natural mode of stopping bleeding from the placental site? Though this is a question of the most immediate practical importance, involving often directly the life of the mother, it has not been specially investigated. We know that strong contractions stop bleeding—a cricket-ball uterus and *post-partum* hæmorrhage are incompatible—but how they operate we do not know. The question is a more complicated one than appears at the first glance. We know of at least three factors which operate: the change in the muscular wall of the uterus in uterine contraction and retraction; thrombosis within the vessels, which occurs "spontaneously" even before separation of the placenta begins, and is a very important factor during and after the third stage; the condition of the blood itself. All of these must be taken into account, and their action is different; the

first compresses the vessels, the second chokes the channel, the third is subordinate to the second. Free bleeding from a firmly contracted uterus, noted in a case of phosphorus poisoning, shows, I think, that this last has an important, though as yet unrecognised, action.

THE MANAGEMENT OF ANTERIOR AND POSTERIOR DISPLACEMENTS OF THE UTERUS.¹

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I AM fully alive to the responsibility which anyone incurs in venturing to lay down definite lines of treatment concerning anterior and posterior displacements of the uterus, for I believe I am safe in saying that upon no subject in gynecology has greater diversity of opinion existed, and upon none have more opinions been expressed with equal confidence. This subject has been the bone of contention between different schools of gynecology for many years. That this should be the case is easy of explanation, and that for various reasons: 1. Because many teachers and practitioners have regarded the conditions as merely mechanical, and directed their treatment accordingly; 2. Others have considered the conditions as the result of inflammatory action, and their treatment has been in strict accordance with their views; 3. Others, perhaps the largest class of all, have regarded symptoms alone, and treated the conditions empirically; 4. It must be further kept in view how frequent are deviations in the position of the uterus, and how prone we are to seize any seemingly pathological condition as an explanation of symptoms and to treat it vigorously when the condition is all the time only a coincidence, not a cause.

Now, in venturing to offer to you a sketch of the treatment of the displacements under consideration, I would have it clearly understood that anterior and posterior displacements occur in two great groups:

1. Displacements in virgins or nulliparæ.
2. Displacements in parous women.

In regard to the first class I am inclined to look upon them, speaking generally, as being congenital conditions; the ante-flexion being in the direction of non-development, and the retro-flexion in the direction of deformity. These conditions in virgins are not infrequently associated with diseased conditions of the annexa, and when they are it is the inflammatory condition of the annexa which requires treatment, and not the congenital deformity or non-development. A well-marked illustration of this came under my observation lately when a patient had for eight years been under treatment with pessaries for an ante-flexed undeveloped uterus. Her distress was so great and persistent that I removed the ovaries, which were extensively diseased, and the woman has had comfort ever since, the uterus still remaining ante-flexed. The progress which gynecology has made in recent years in advancing our knowledge of the uterine annexa has shown conclusively that many cases of pain and, dysmenorrhœa which were formerly attributed to uterine displacements are due entirely to conditions of the ovaries and tubes independently of a concurrent displacement which may mean nothing. Deviations in the position of the uterus of minor degree give rise in the single woman to no symptoms, and require, therefore, no treatment. Marked versions uncomplicated with some pathological condition, such as a fibroid, are rare in single women, and when uncomplicated give rise to very slight symptoms, and need no mechanical interference. When the flexion backward or forward is very acute, I do not deny that it may be associated with severe dysmenorrhœa. Even admitting that these displacements in virgins give rise to some discomfort, what treatment is at our disposal? Vaginal pessaries are seldom if ever curative, and intra-uterine pessaries are surrounded with such risk in the direction of inflammation, hæmatocœle, and ovaritis, that so far as I am concerned I have discarded their use altogether. Let it be distinctly understood that I by no means wish to say that, in the hands of an

¹ Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association held in Dublin, August, 1887.

experienced gynaecologist, there are not cases, especially of retroflexion in virgins, in which the pressure symptoms from hypertrophy and enlargement are to be remedied in no other way than by stem pessaries, but these cases are, so far as my experience goes, extremely few, and do not fail to be discussed in a general view of the case. It is only fair to say that intra-uterine stem pessaries have within my knowledge, in some exceptional cases, rendered benefit; but on looking back over an experience of nearly twenty years I mean to say that I have known them do more harm than good, and as a teacher of gynaecology I have found it my duty to warn students and practitioners against their use.

But the question naturally arises as to the cure of dysmenorrhœa, which unquestionably is often associated with, although not necessarily dependent on, these displacements. Is no mechanical treatment to be adopted? Now, upon this point there seems to be too great a tendency to local interference for dysmenorrhœa in virgins. I should withhold local treatment altogether unless its severity be such that, after all other means failed, it interferes with a rich woman's social engagements or a poor woman's means of livelihood, for it must always be kept in view that dysmenorrhœa is but a relative term. When, however, local examination and treatment become necessary, then vaginal pessaries are of little avail, and intra-uterine stem pessaries are unsafe. Dilatation of the cervix with a dilator bougie or an occasional passage of the sound, with the persistent use of the hot vaginal douche, will often effect a cure both effectively and safely. Here I must enter a caveat against the indiscriminate use of the sound and dilators, unless accompanied by careful precautions; and these are (1) that there be no recent or remote peri-uterine inflammation; (2) that the greatest care be taken as to the perfect cleanliness of the instrument.

Much as we owe to the sound, yet I feel sure that its indiscriminate and routine use has been a fertile source of uterine mischief.

In a word, then, in unmarried women and nulliparæ, with some exceptions too few to affect the general statement (the conditions being usually congenital), vaginal pessaries are of no avail, and intra-uterine are always dangerous and usually hurtful. When aggravated dysmenorrhœa is concurrent with a simple displacement, then the use of a sound, bougie, or dilator, along with hot water, will often effect a cure. If there be the least pathological condition to be found in the annexa, there should be no mechanical treatment, but only the hot douche.

With regard to parous women, the case stands differently. In them, unlike the others, the displacements are usually, if not always, acquired. In the case of ante flexion and anteversion, which in parous women are so often induced by various forms of peri- and parametritis, and by inflammation of the utero-sacral ligaments specially, mechanical treatment in the shape of pessaries is seldom indicated. The sphere for anteversion and ante flexion pessaries in parous women—if, indeed, they have a sphere at all—must be when the displacement does not depend upon any inflammatory condition outside the uterus, but is solely due to an increase in its weight. Even in such cases, which are rare, the trouble and annoyance to both physician and patient attending their use is more than sufficient to outweigh their temporary comfort. Of stem pessaries in forward displacements of the uterus in parous women, I have no experience, and I have yet to see the case in which I consider their use desirable. The majority of these anterior displacements give rise to very unimportant symptoms. When they do, the symptoms are due to some inflammatory products outside the uterus, and the treatment is to be directed to its removal (1) by the hot vaginal douche; (2) by blisters; (3) by iodine applied to the vaginal roof; and (4) by small doses of iodide of potassium and perchloride of mercury internally. Sometimes a soft glycerine ring pessary, by relieving tension and elevating, may do good, but as a rule even this is contra-indicated.

Coming now to posterior displacements in parous women, namely, retroversion and retroflexion, we are bound to recognise the fact that they are specially prone to arise mechanically. This will appear obvious if we consider the frequency with which these conditions occur after pregnancy as a result of imperfect involution, dorsal decubitus, increase in weight, and too early rising.

The origin of these parous posterior displacements being usually, though not always, mechanical, and the symptoms to which they give rise, such as sterility, leucorrhœa, menorrhagia,

and pressure, to a greater or lesser extent being well recognised, their treatment must be mainly based on mechanical principles.

1. Tone must be given to the uterus by the use of ergot and hot-water douching.

2. The uterus must be carefully adjusted in one of several ways: (a) by pressing up the fundus; (b) by pressing back the cervix; (c) by the genu-pectoral position; (d) by dragging down the lip of the cervix with a volsella; and lastly, by the sound. In any case, accurate and careful reposition of the uterus in any of the ways I have mentioned is essential. I place the sound last because I really think that the bimanual replacement of the uterus is the safest and most thorough, and because the introduction of any body into the cavum uteri is always to be avoided when practicable.

3. The uterus must be retained in position by a pessary. In the case of a well-marked retroversion, a well-adjusted Hodge, or some of its many modifications, will be found to act efficiently, whereas in the case of a well-marked retroflexion the ordinary ring pessary will act better than the Hodge. The Hodge in such circumstances is inapplicable because of the difficulty of adjusting it so as to act with much advantage on the fundus, and it is apt to get into the sulcus between the cervix and uterus, and so aggravate the condition it was intended to cure. In such cases the ordinary ring pessary, by elevating the whole uterus, will give most relief.

In some aggravated cases of acute flexion with hypertrophy, stem pessaries may, under exceptional circumstances, be required, but this must always be regarded as a *dernier ressort*.

In that class of cases—which is exceedingly frequent—where there is some degree of flexion and version combined, the Hodge will most frequently meet the requirements of the case. Should there be any adhesions or any ovarian prolapse the soft india-rubber glycerine ring will be most generally serviceable.

Dr. LOMBE ARTHILL expressed his disbelief in ante flexion as a disease, or even as a condition demanding treatment. If it occurred in connection with dysmenorrhœa in a multiparous woman, and depended on uterine causes, those causes would generally be found to be a conical cervix and a contracted cervical canal. The virgin uterus being naturally ante flexed, pessaries in such cases were useless, and stems most objectionable. Cases of retroflexion were always acquired, and in many of them a pessary, such as a Hodge, was very useful, and a great aid in curative treatment, but it must never be looked on as being itself curative; in some cases the retroflexed fundus pressed against the rectum, and interfered with defecation. In these a well-adjusted pessary often gave marked relief; but the mere fact of the uterus being retroflexed, provided that it caused no discomfort or symptom, did not necessarily demand treatment.—Dr. BARNES said Dr. Halliday Croom objected to Hodge's pessary in extreme retroflexion, because it got between the cervix and the retroflexed body, and resorted to the ring pessary. Now he (the speaker) contended that all depended upon a proper choice of pessary. The true idea of a good pessary was Hodge's; it must act as a lever, and, therefore, the uterus must be movable, and the pessary must move with it, forming, as it were, part of it; and for this it must be well adapted to the particular case. The ring pessary had become to him an abomination; it stretched the vagina, weakened the natural supports of the uterus, and thus left the patient worse than before. On the other hand, by first reducing the uterus, the patient lying on her hands, a gentle touch of the finger would push the fundus over to the left side of the promontory, where it would easily rise to its position, and then a glycerine-pad pessary passed in would keep the fundus from falling back. Dr. Barnes believed that cases of distress from ante flexion were quite rare, and he had seen good from Graily Hewitt's cradle pessary, but great care was required in adapting the pessary to the case. With reference to the statement that, before applying a pessary, you must reduce the congestion or swelling of the uterus, that was attempting what could not be done. The removal of congestion depended on keeping the uterus *in situ*. All depended upon judgment in selecting the pessary.—Dr. JOHN A. BYRNE said that whilst he had learned a great deal from Dr. Barnes, he could not agree with him about the non-necessity of previously replacing the uterus. (Dr. BARNES here explained that he did not mean to assert this.) He (the speaker) had a good deal of experience of uterine affections, and he was of opinion that retro-displacements were very frequent, whilst anterior displacements were extremely

rare. No doubt this displacement was sometimes observed in those cases where the uterus and appendages were bound down by old inflammatory products; but as an originally abnormal displacement, it was in his opinion extremely rare. He could not agree with Dr. Atthill, even in cases where a retroversion or flexion was observed, and where no urgent symptoms were manifested, that still he should not attempt replacement; the reposition and retention could not by any possibility do any harm. We should do all in our power to remove any hyperplastic uterine condition, although he was of opinion that too much importance was attached to this so-called metritis; and in an organ like the uterus we should expect that there must be occasionally engorgement and, perhaps, hyperplasia; but he thought that there was a good deal of exaggeration on this subject. He entertained a very strong objection to the use of the stem pessary. There was one circumstance that occasionally accompanied retro-displacement, namely, sterility; when in consequence of the curvature the woman did not conceive, the replacement had in his hands been attended by the most beneficial results.—Dr. MORE MADDEN said the importance of flexions in relation to the causation of sterility was a subject brought daily under his observation, and one which could not be too strongly insisted on; for in the great majority of cases of sterility and dysmenorrhœa, whether there was stenosis of the cervical canal or not, he was firmly convinced that any operative treatment would generally be useless unless the coexisting displacement or flexion were at the same time remedied, as either might be by a properly adjusted, well-fitting Hodge lever pessary.—Dr. WILLIAM DUNCAN said it always seemed to him remarkable that, when gynecologists discussed uterine displacements, some considered all cases required mechanical treatment, and others deprecated any treatment whatever. Dr. Duncan, whilst admitting that cases sometimes required local treatment, considered the majority of cases of versions or flexions caused *per se* no trouble, and required no treatment. He thought that it was bad practice to introduce a vaginal or stem pessary in any case of antelexion, but that the raising up of the uterus in the pelvic cavity by a Hodge or ring pessary in cases of backward displacement relieved the circulation in the uterine and ovarian veins, and thus did good. He did not believe that a pessary ever cured a version or flexion. He thought that a grave responsibility rested on teachers who practised and advised the frequent use of pessaries in the treatment of versions and flexions.—Dr. ROUTIN said no one would think of treating a case which had no symptoms. Patients came to us when they had severe symptoms which required treating; but even here pessaries were not always to be at once applied. Simple measures, such as local depletion, purgatives, etc., should first be tried; if these failed, then pessaries might be tried. As to stem pessaries, they were condemned mostly by those who had never used them, or only to a very small extent. If proper measures were taken at first to prevent inflammatory complications, and the stem pessaries were not too long, and rest were insisted on for some days after their application, accidents were few and far between.—Dr. ILLINGWORTH endorsed Dr. Barnes's remarks upon the importance of the mechanical treatment of uterine displacement, and bore testimony to the value also of the stem pessary, and particularly to that form invented by Dr. Gordon Black, of Harrogate. He had used this in two cases, which had only been partially relieved with Hodge's pessaries, but which were rapidly relieved by this form of stem.—Dr. M. CAMERON said cases of displacement did not remain as when first met with, but went on from bad to worse unless properly treated. He would also like to state that satisfactory results had been obtained in Glasgow from shortening of the round ligaments, the use of the tampon, and hot-water injections. He had every confidence in the use of pessaries.—Dr. W. J. SMYLY said the uterus was maintained in position by intra-abdominal pressure, but its displacement was prevented by the ligaments. When the latter were subinvolved, then they could not perform their functions when the uterus was replaced, so that the intestines came to press upon the posterior surface; a Hodge's pessary, by practically shortening the utero-sacral ligaments, would prevent its displacement. When the uterus was in position, and the pessary acting properly, the fundus was about three inches removed from the posterior bar, and therefore to speak of supporting the fundus was erroneous, and to invent soft pessaries filled with glycerine, so as not to hurt it when tender was unnecessary.—Professor A. WALLACE said he agreed almost entirely with Dr. Halliday Croom's methods of treatment. There

was one plan which had not been noticed—namely, the use of tampons, which were first used by Marion Sims. These were made by saturating cotton-wool with glycerine, which might be medicated by various substances, as astringents, antiseptics, etc. He had used this method for many years as a preliminary to the use of a pessary. The pessary which he always used for cases of posterior displacement requiring mechanical support was the Albert Smith's modification of Hodge's, made of soft, pliable metal which could be bent and fitted according to the requirements of the individual case.—Dr. J. WALLACE (Liverpool) referred to the difficulty of discussing this large subject in the short time permitted. As a teacher and practitioner he had been guided by certain principles. First, the pathological conditions, and secondly the mechanical, were to be observed and treated as stated *seriatim*. But no case could be scientifically put under treatment unless its etiology as well as its morbid conditions, pathological as well as mechanical, were determined. In virgins displacements were often produced by straining at stool, by prolonged standing, as in shop girls, schoolmistresses, and in ladies who followed fashion in tight lacing, dancing to excess, and a relaxed muscular system and health generally. Antelexion of cervix, the os uteri pointing forward to the pubes, slight procidentia of the body of the uterus, and retroversion of the fundus uteri, often retroflexion—in short, the sigmoid uterus. This form did not always give rise to symptoms, but they came at last, local or reflex, and required treatment. These might be cured by constitutional and local treatment without pessaries. In married women with sterility, posterior section of cervix would frequently cure. In women who had had numerous children in a few years, sub-involution of the uterus and of the Fallopian tubes and ligaments, with diseased conditions of the endometrium, was common. Dr. Wallace drew particular attention to the open Fallopian tubes, which he had found to be almost the rule in these *post-partum* cases of displacement. Engorgement might depend upon flexion, but he felt sure it arose from displacement. Local treatment such as the hot douche, applications to the cervix according to the intensity of the morbid conditions, and sedative pessaries would relieve the local tenderness, after which a pessary adjusted to the requirements of the individual case might be safely placed. He confessed that he was surprised at the statement that pessaries did not cure. They certainly did, provided the pathological conditions were also cured.—Dr. GRIGG stated he quite agreed with all that fell from Dr. Wallace and Dr. Smyly with reference to the important function the ligaments performed in relation to the retention of the uterus in its proper position, and instanced cases of primiparous women, whose uteri were perfectly normal antecedent to pregnancy, recovering from the puerperium with retroversion, coupled with the descent of the whole pelvic organs. With regard to Dr. Wallace's statement that he could pass a uterine sound through the Fallopian tubes shortly after delivery, this Dr. Grigg controverted, and stated he had never succeeded in passing even a probe through the Fallopian tube in the cadaver of women confined within a few hours to three or four weeks.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE ENDOMETRIUM.¹

By W. J. SMYLY, M.D.,

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I KNOW of one method only by which the diseases of the uterine mucous membrane can be diagnosed with accuracy, and that is by the microscopic examination of portions removed by means of the curette. In the majority of cases a fairly correct diagnosis may be arrived at without resorting to the microscope, but not with certainty. When, for example, a medium-sized curette can easily pass into the uterus, and is there found to be freely movable in an enlarged cavity, and over a soft and velvety but irregular surface; and when its cutting edge is used long strips of hyperplastic membrane come away, we should probably be correct in supposing the case to be one of fungous endometritis, but it might be one in which the decidua had been retained, or a simple or malignant adenoma; for the appearances of these to the naked eye present a very close resemblance to each other, but microscopically they differ very widely. Should only a few small shreds of

¹ Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association held at Dublin, in August, 1887.