REMARKS ON THE MECHANICAL TREATMENT OF UTERINE DISPLACEMENTS AND FLEXIONS.*

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THE present seems a favourable time for re-opening the consideration of what we may term briefly uterine mechanics. Professional opinion is still divided upon this much vexed question; but there are indications that it is undergoing a change. Gynæcologists are still far from being agreed even as to the propriety, much less as to the exact nature, of the mechanical treatment to be employed in this large, important, and interesting class of cases. We have two extremes of opinion as to the clinical importance of uterine displacements and distortions. According to the one, these conditions are always the active or potential source of grave local and general troubles, and should therefore be at once brought under treatment, mainly of a local and mechanical character; according to the other extreme, the conditions in question are to be regarded simply as the passive local expression of troubles to be looked for and treated elsewhere, either in ovarian irritation or in disordered states of general health. It is greatly to be regretted that not only have opinions in regard to these questions been too extreme, but sentiment, if not personal feeling, has too evidently prevailed in their expression.

When trustworthy evidence is adduced in support of certain views as to matters of common interest, it is the duty of those who incline to another opinion to examine carefully and with unbiassed mind the facts stated, to judge of them calmly, and express themselves temperately. But to ignore, to refuse to investigate, and to assert dogmatically contrary opinions, is neither courteous nor scientific. No progress is possible in any direction, were this the attitude and method adopted. Prejudice, unfortunately, has, in this as in other important questions, interfered too often with calm judgment, and has induced an attitude of incredulity and tone of opposition at once unreasonable and unscientific. It is impossible otherwise to explain the conflict of opinion as to questions of fact between scientific men of equal information and opportunity for judgment.

Displacements and flexions of the womb are in no sense obscure, much less speculative in character; they are purely physical conditions, even more capable of recognition than the fractures and dislocations of surgical experience; and their relief and cure by the judicious use of appropriate mechanical appliances are as capable of demonstration as any in the whole domain of medicine. I have had a continuous experience of the mechanical treatment of this class of ailments, extending over a quarter of a century; and I am more and more convinced that it is the only efficient means, when confirmed, for their relief and cure. I readily admit that in incompetent, perhaps in unscrupulous, hands, their employment has often been unnecessary, dangerous, mischievous, and sometimes fatal; but I maintain these are accidental and preventable abuses, and do not in the slightest affect the sound principle of the treatment.

With these preliminary remarks, I will now proceed to state the subject we have to discuss. It resolves itself naturally into a question of pathology and a question of therapeutics. I would, therefore, seek to establish my thesis in two propositions.

1. In some women, certain well defined groups of local symptoms, and evidently related constitutional disturbances, are found associated with certain flexions and displacements of the uterus as the only recognisable organic exciting cause.

2. In appropriate cases, local suffering and constitutional disturbance subside on reduction of the displacement or flexion, and the retention, for a longer or shorter period, of the womb in its normal attitude and axis by mechanical appliances is followed by permanent relief and cure.

1. Nothing in uterine pathology is more remarkable, and often inexplicable, than the varying amount of pain and distress which such condi-

tions involve in different patients. A slight disturbance of uterine equilibrium will produce continuous suffering in one woman, while extreme forms in another will be borne with comparative impunity. This pathological anomaly is often adduced in triumph by the opponents of mechanical treatment. But it is equally well known that in other morbid states phenomenal parallels are observed. In every disease, different patients react differently to the same exciting cause, and this is more evident when the latter is physical in nature and local in action.

Dr. George Johnson has described a case in which a fragment of cloth, of the size of a small pea, lodged in a superficial wound, produced violent tetanic symptoms, which subsided immediately it was removed; and another case in which a much larger mass worked its way from a deeper seat by a slow process of suppuration, without giving rise to the slightest constitutional disturbance. So with respect to uterine displacements and flexions; some women will have them to an extreme degree without suffering, for a time at least, to any serious extent; in others, a slight lesion will give rise to intense local suffering and great general sympathy. In others, again, the symptoms are either entirely local, or altogether general in character. It would be easy to illustrate each of these conditions from one's case-book. We can have no disturbance of uterine equilibrium without more or less interference with the vascular and nervous supplies of the organ, and, through them, with its secretory apparatus. Hence arise congestion leading to inflammation, morbid sensibility and pain from pressure on the nerve-filaments, and excessive and perverted glandular secretion, as the direct physical results of this disturbance. The clinical importance of these conditions cannot be overlooked as immediate factors in the causation of a variety of functional derangements; and, if not corrected, ultimately, sooner or later, they induce changes of structure of a grave character. Women who are the subjects of uterine distortion and dislocation suffer, more or less, from disturbance or interruption of the two great distinguishing functions of their sex. Menstrual irregularities and sterility are usually present; and are, in most instances, the subjective conditions which attract the attention of the patient, and lead her to seek professional advice, which results in the recognition of the disability.* Great stress has been placed by one eminent advocate of uterine mechanics on the value of diagnosis as a basis of therapeutics. I believe the mere recognition of the morbid state to be an insufficient basis of treatment, without a full knowledge of its etiology and essential pathological nature. Hence, it is impossible to consider the mechanical treatment of uterine troubles, except in connection with them. With respect to the immediate causation of all forms of flexion and version of the uterus, it must be borne in mind that, in addition to stretching or relaxation of the proper ligaments of the womb, the supporting power or rather function of the vagina and its attachments has been more or less reduced, so that there is always at the same time a certain amount of uterine procidence or displacement downwards. The importance of this pathogenetic relation has not hitherto been sufficiently recognised. In fact, there can be no shortening of the vaginal tube from whatever cause, and consequent subsidence of the uterus within the pelvis, without a disturbance of uterine equilibrium to a certain and usually corresponding degree. There is, then, an essential relation between procidentia and version of the womb; and this relation at once satisfactorily explains the beneficial action of purely vaginal supports, to some extent, in all such cases, and, it may be, completely in slighter forms.

The recent investigations of Dr. Hart into the anatomical relations of the pelvic fasciæ throw a most valuable light on the mechanism of uterine dislocation—indeed, they supply an essential link in the chain of causation. Two layers or planes of fascia, which form a sort of pelvic diaphragm, are mainly concerned in maintaining the uterus *in situ*. The anterior or pubic is roughly triangular in shape, with its base stretching across the pelvis, meeting the anterior edge of the square-shaped posterior or sacral plane, and sustaining the womb between them. The womb inclines forward; the pubic layer is thinner, and naturally looser, on the attachments, than the sacral, and permits the amount of uterine mobility rendered necessary by the varying conditions of the bladder and rectum, and the enlargement of the organ during pregnancy; but, it is to be observed, this normal mobility is provided for to a certain extent forwards and backwards, and upwards, but not downwards. Relaxation or rupture of these layers of fascia will favour uterine displacement; but the direction of that displacement will depend upon which layer is most involved. If the pubic layer have suffered, anteversion will result; if the sacral layer have yielded, then retroversion will occur. Such, then, is the mechanism of dislocation of the uterus, which results entirely from altera-

* Introduction to a discussion in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Ryde, August 1881.

* Paulus Ægineta recognised distortions of the womb and their effect in producing sterility, and suggested *cœtus a posteriore* as a possible means of overcoming the difficulty as regards conception.

tions in the condition of its attachments and supports. Increased bulk and weight of the womb might help to produce displacement, and subsequently exaggerate it, but could not alone initiate the movement.

The causation of distortion or flexion, on the other hand, while undoubtedly favoured by displacement or version, is more immediately dependent, as we would expect, on changes in the tissues of the uterus. These altered conditions are chiefly two; namely, atony, for, as has been pointed out, the uterus is to some extent an erectile organ; this loss of tone may proceed from deficient innervation, from anaemia, or other deterioration of general health; or, secondly, actual tissue-degeneration, the effect of superinvolution. Softening of the substance of the womb from a chronic inflammatory process has been alleged by a distinguished authority, but chronic interstitial inflammation—the “irritable womb” of Gooch, so frequently met with—is attended with induration and hypertrophy of the organ.

Cases of acute displacement or flexion of the womb, which occur most commonly in the virgin state, are rarely seen. They are usually seen only when chronic and local and general symptoms have been developed.

Each form of flexion and version produces a characteristic group of dynamical symptoms. In anteversion and ante flexion, the bladder is troubled. In retroversion and retroflexion, the rectum is disturbed; there is more bearing down and pain in the back. In the flexions, there is dysmenorrhœa; in the versions, menorrhagia, especially in retroversion. In flexions, reflex symptoms, particularly gastric, are more common, especially if the seat of flexion, as it usually is, occur near the junction of the neck and body. Sterility attends flexed more than verted states. The physical diagnosis of these conditions, under ordinary circumstances, should be easily made. The sound will, without fail, resolve any doubt. The finger alone, in most cases, is sufficient to detect the exact condition present. In uterine version, backwards or forwards, the axis of the womb is maintained, and the os points backwards or forwards, according to the direction and degree of malposition, but its lips are equal. Rhazes, the Arabian physician, who was familiar with these conditions, recognised the relative position of the os uteri to the vaginal axis as indicating malposition, and actually recommended the reposition of the organ to be effected by pushing or drawing the os uteri in the opposite direction to the displacement. In flexions, the relative positions of os and fundus depend on the extent to which the uterine axis is bent. If of any standing, the cervical lip corresponding to the flexion is found swollen and elongated, from the alteration in the nutrition involved from the corresponding wall being bent on itself.

2. In proceeding to consider my second proposition, I must necessarily confine myself to discussing briefly the principle only of the mechanical means of treatment. The first step in the mechanical treatment is the restoration of the organ to its normal form and position by means of the sound. The real difficulties of treatment, unfortunately, only begin at this point. In cases which have occurred suddenly as the result of some direct violence, such as a fall from a height or on a hard substance, or the lifting of too heavy weights, if they be seen at once, simple reposition by the sound, or even by judicious manipulation, will suffice. But nearly all the cases which come under our observation have existed for some time, and have been gradual in their incidence and development. In all of these it is necessary, after reposition of the womb, to devise means for its retention *in situ*; otherwise the relief which is invariably thus obtained will only be temporary. In a few cases, occasional reposition or straightening with the sound, combined with rest and astringent medicated pessaries, and attention to the general health, may attain the desired result. In flexions, the occasional dilatation of the uterine canal with sponge or tangle tents may overcome the difficulty, by restoring the anatomical equality and increasing the tone of the uterine walls. But, in most cases, vaginal supports or pessaries have to be employed in some form or other. They are, of course, more effective *per se* in versions than in flexions. By exaggerating, by means of the sound, the flexion in the opposite direction from time to time, and wearing a pessary in the interval, I have succeeded in curing many cases. The principle on which the American pessary of the late Professor Hodge is constructed seems most to recommend itself, and in its various modifications this pessary can be made to meet the indications of almost any case. The exact *rationale* of its action is not, I fear, sufficiently understood. In retroversion and retroflexion, the *point d'appui* is behind the symphysis pubis, the other curve of the instrument occupying the posterior vaginal *cul-de-sac*. In anteversion and ante flexion, the perineum is the *point d'appui*, the opposite bar occupying the anterior vaginal *cul-de-sac*. The great desideratum in all these cases is, that conception may take place, as it frequently does, while the womb is artificially maintained in its normal position. A patient of mine, who

was confined, two months ago, under the care of a professional brother, has, after a long childless interval, been twice impregnated while wearing a modified Hodge's pessary, without which she is incapable of rising from her couch. Since her last confinement, the gradual improvement in the condition of the womb which has been going on so long, has culminated in her being able to dispense at last entirely with this mechanical support.

Cases, however, of retroversion and anteversion, and many more of flexed conditions, are encountered, in which local medication and vaginal supports alone entirely fail to relieve even the urgent symptoms that have called attention to the lesion. The question then arises: Do these cases warrant or demand such appliances as the intra-uterine stem-pessary? To this question, I unhesitatingly reply in the affirmative. I am, however, prepared to admit—indeed, it is within my own knowledge—that this treatment has been too often indiscriminately and unnecessarily employed, and often detrimentally in inappropriate cases, or under unfavourable conditions; nevertheless, I maintain that the intra-uterine or stem-pessary can be used with perfect immunity, and with the best effects, in appropriate cases. The uterine tissues, particularly the mucous lining, are in their normal state of low sensibility, and singularly tolerant of manipulation, even of rough usage. It would indeed be strange if they were not, considering how much they are called upon to undergo, in connection with the ordinary discharge of their functions. I have found the uterine cavity, under ordinary conditions, as tolerant of metallic substances as the mouth similarly is of the appliances of the dentist, or as the conjunctiva of the presence of an artificial eye. But, under conditions of irritation or inflammation, it is very different; and, like corresponding structures elsewhere, the uterus becomes highly sensitive, and strongly resents all interference until the morbid state is reduced. One should hesitate to introduce, even temporarily, the uterine sound, much less to leave a foreign body like the stem of a pessary within the cavity of the uterus, were that organ and its associated structures in an irritable or inflammatory state; such conditions must first be reduced by appropriate means, of which rest, local sedatives, and depletion are the most efficient. In any case where it is possible to anticipate difficulty, it were wise to insist upon a probation of rest after introduction, in order to test tolerance. This, however, is not often necessary; indeed, I have very seldom seen the presence of the instrument resented when used with the ordinary precautions just indicated.

In order that the stem-pessary may be retained, and the full benefit of its presence be derived, it is absolutely necessary that it be exactly of the length of the uterine cavity and of the calibre of the os uteri. If it be too long, the bulb of the instrument will not be in contact with the cervix, and the point will irritate the fundus and cause its expulsion; so also, if too short, it will not be retained. I am here speaking of simple homogeneous stem-pessaries of metal or vulcanite; but in cases where there is uterine atony, especially with defective menstruation, I have found great advantage from the introduction of the copper and zinc galvanic pessary. Many patients are perfectly conscious of a feeling of throbbing—of the stimulating effect of this instrument; whereas they are quite unaware of the presence of the simple stem when properly adjusted.

We have here two indications for treatment met with the same instrument: first, the necessary mechanical support; and, secondly, the direct stimulus to the debilitated uterine tissue from the galvanic current developed. This view of the influence of the galvanic current has quite recently received confirmation in the admirable papers by Dr. Dixon Mann on Uterine Electro-therapeutics, which have appeared in the *Lancet*. There are, however, occasionally met with, cases where even still more elaborate appliances than those already referred to are necessary. In extreme cases of version, and especially where flexion and version coexist, and where the organ is low in the pelvis, it may be requisite to combine the intra-uterine stem with a vaginal support. At first, this was attempted, by the late Sir James Y. Simpson, Dr. Gailard Thomas, and others, to be accomplished by a variety of contrivances having their object to obtain a *point d'appui* externally on the pubes or sacrum, of which many varieties exist, now mostly and very properly relegated to gynecological museums. For a great many years, so far as I am aware, all instruments on this principle have very properly been abandoned as inefficient, uncleanly, and not unattended with danger. Latterly, the late Sir James Y. Simpson maintained the replaced uterus with intra-uterine stem *in situ*, by introducing under it a gutta-percha plane on a depending stem curved in the direction of the vaginal canal, which, although sometimes difficult and painful to introduce, answered very well.

A combination of intra-uterine stem and vaginal support in vulcanite was introduced by myself some years ago for a case of special difficulty quite cured by its means, and has since been used in

other cases besides some of my own with success. There is also an admirable instrument on this plan invented by Dr. Meadows, which is deservedly in great request for this difficult class of cases; but I fear I must not trespass further on your time. If I have failed to establish the two propositions I set out with, I shall be pleased to think if I have succeeded in removing some of the unfounded prejudice with which the mechanical treatment of uterine displacements and flexions has been, to my mind, so unreasonably regarded.

If those who so strenuously oppose this therapeutic system had any preferable alternative to offer in its stead, there might be some less difficulty in understanding their position; but it is not so. A specimen of the treatment they recommend is embodied in the following quotation, with which I shall conclude. "Time is an important factor in uterine therapeutics. Patients" (suffering from uterine flexions, etc.) "should be kept for a length of time under observation, and should be seen and examined at intervals"! What benefit is to be derived from such a process of expectancy in the class of ailments which we have been considering, it is not easy to discover.

REMARKS

ON

THE RELATION OF DISEASES OF THE NASAL-PASSAGES AND NASO-PHARYNX TO AURAL AFFECTIONS.*

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THERE can be little doubt that an essential advance has been made, of late years, in the knowledge and treatment of those morbid states of the nasal and pharyngeal mucous membranes which give rise to disease of the ear. We have amongst us to-day two eminent *confirères*, who have contributed not a little to this advance in our knowledge. I refer to my friends, Dr. Guye of Amsterdam, and Dr. Loewenberg of Paris, whose work, in connection with the important subject of adenoid vegetations, has been of the greatest value.

Aural specialists have been of late more and more convinced of the great signification of nasal and pharyngeal diseases in their relation to affections of the ear. We recognise, as one of the well-established points of aural pathology, that this region is not only frequently the place of origin of ear-diseases, but that its morbid conditions have a most important influence on the course and issue of affections of the middle ear; and, therefore, in our modes of examination and in our therapeutic measures, attention to the naso-pharyngeal cavity is looked upon as of the very first importance. Even in cases where no further improvement is to be hoped for in the hearing power, we may often, through treatment of the nasal and pharyngeal mucous membrane, prevent the further advance of the evil.

The apparatus of the middle ear is influenced by very varied morbid conditions of the nasal and pharyngeal spaces. These conditions exert their influence upon the middle ear through the medium of the well-known passage of communication between the upper pharyngeal cavity and the tympanum—the Eustachian tube. By this channel the mucous surface of the middle ear, and that of the pharynx, are directly continuous; while, by the same channel, under certain conditions, free interchange of air takes place between the two cavities. Thus, by these two media of communication, mucous membrane and the air—pathological conditions of the naso-pharyngeal cavities—impress themselves upon the structural and functional integrity of the middle ear.

We know that affections of mucous membranes are very apt to propagate themselves by simple continuity. Hence, a large number of diseases of the tympanum and mastoid cells are caused by simple propagation, along the mucous surface of the Eustachian tube, of catarrhal or inflammatory processes, primarily affecting the lining of the pharyngeal cavity. And such diseases of the tympanum and mastoid cells, with their results, may exist even years after the primary cause in the pharyngeal mucous membrane has passed away. No one now disputes that congestion, swollen and hypertrophied conditions of the naso-pharyngeal mucous membrane, very frequently maintain a state of simple or purulent catarrh of the middle ear.

But important changes in the structure and function of the tympanic apparatus may arise from pathological conditions of the nasal passages and pharyngeal cavity, without any extension of inflammatory processes

along the mucous surface of the Eustachian tube to the tympanum. Here the mischief in the ear is brought about through mechanical interference with the lumen of the pharyngeal mouth of the tube, by the encroachment upon it of swollen, thickened, or hypertrophied tissue in the neighbourhood; or the injury to the ear may be caused by disturbance of that muscular mechanism by which the walls of the cartilaginous part of the tube are, in turn, separated or approximated. Such occlusion of the tube, going on for a length of time, will inevitably lead to permanent changes of structure, and irretrievable defect of function in the organ of hearing.

Upon the due permeability of the Eustachian tube depends the proper degree of tension of the tympanic membrane and the ossicular chain; and there is probably nothing which is so essential to the normal function of the organ of hearing, as the preservation of a due amount of tension in these parts.

It is not possible, in so short a time as it is proper that I should occupy your attention, to go over all the various ways in which morbid conditions of the mucous membrane, of the muscles, and of the nerves of the nasal passages, and naso-pharynx, may and do act upon the ear. I desire just to occupy a few minutes by adverting to a subject which has recently received great attention—not greater, however, than its importance deserves. I refer to the so-called adenoid vegetations in the upper pharynx. We are much indebted to Meyer of Copenhagen, and to Guye of Amsterdam, for their valuable labours in connection with this subject; and, recently, to Loewenberg of Paris, for his important treatise.

As you know, the mucous membrane of the naso-pharynx is very rich in mucous glands. But, besides these, Luschka has described a mass of glandular tissue, which he denominates the pharyngeal tonsil, found chiefly in the roof of the pharynx, but which also extends from the roof along the posterior and lateral walls into Rosenmüller's fossa and over the mouths of the Eustachian tubes. The so-called adenoid vegetations consist of an exuberant growth or hypertrophy of this adenoid tissue, and appear in the form of either tongue-shaped, or globular, or flat excrescences, chiefly on the postero-superior wall, from which, however, they not unfrequently extend to the posterior nares, where they interfere with the due permeability of the nasal passages. The pharyngeal mouths of the Eustachian tubes are often completely veiled by the mass of growth. Meyer found that $7\frac{1}{2}$ per cent. of persons who consulted him with affections of the ear suffered from this morbid state of the naso-pharynx. In connection with and dependent upon this condition, the ear is variously affected; sometimes we find purulent disease, and sometimes simple catarrh, resulting from or maintained by these morbid growths.

Disease in the ear may be caused by these vegetations in various ways: 1. By encroaching upon the pharyngeal mouth of the tube, and thus bringing about mechanical closure; 2. By the concomitant inflammation of the mucous membrane of the Eustachian tube, producing swelling or thickening, with more or less secretion; 3. By the extension of that inflammation to the mucous membrane of the tympanum, or even to the mastoid cells; 4. Through interference with the nasal breathing. When the nasal passages are markedly obstructed, a rarification of the air in the tympanic cavity is produced by every act of swallowing, just as in Toynbee's experiment, and the tympanic membrane with the ossicular chain is forced inwards to an abnormal degree. Or obstruction of the nasal passages may induce mischief in the ear, by causing sudden abnormal condensations of the air in the tympanum. Under the influence of vehement expiratory acts, as coughing, blowing the nose, sneezing, etc., the air, unable to find its way through the nasal passages, may pass through the Eustachian tubes with damaging effect upon the middle ear.

The treatment of these adenoid vegetations is of very great importance, not only for its effects upon the ear, but also in relation to the general health. Although the methods of examination and of treatment employed in diseases of the naso-pharynx do not properly belong to our subject, I would venture to say a word regarding one of the methods of examining the upper pharyngeal cavity, and one of the modes of treating these adenoid growths which I have found very useful. I refer to digital examination, and to the treatment of adenoid growths by the finger-nail. Since I have begun to explore more frequently the upper pharyngeal cavity with the index finger in persons having disease of the ear, I have found with surprising frequency a hypertrophied condition of the glandular tissue in the vault of the pharynx. By this mode of examination, we can, in most of the cases, gain a pretty clear notion of the condition of the upper surface of the soft palate, of the posterior edge of the nasal septum, of the posterior end of the inferior spongy bone, of Rosenmüller's fossa, and of the vault of the pharynx. I might just remark here that it is a mistake to judge of the condition of the upper pharyngeal space from the appearance of the back of the

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