On the pathological relationships of uterine displacements : being the annual oration delivered before the Hunterian Society / by G. Ernest Herman.

With the Author's Compliments.

18.

On the Pathological Relationships of Uterine Displacements.

Being the Annual Oration delivered before the Hunterian Society.

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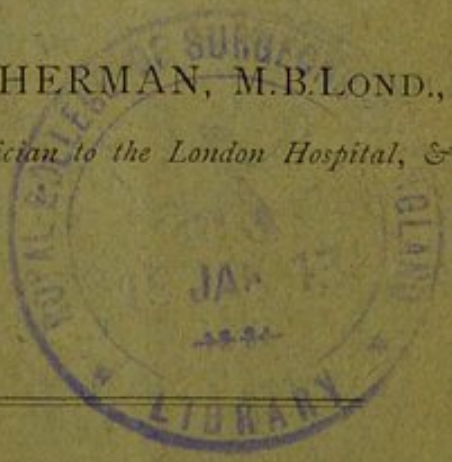

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On the Pathological Relationships of Uterine Displacements.

AFTER some introductory remarks the orator said: I ask my audience to give their attention for a little while to the much-discussed question of uterine displacements. I wish to consider their pathological relationships, their place in a natural classification of disease; and from this standpoint they must interest anyone who takes an interest in scientific medicine. Small as this subject is, it is necessary to limit it. I remember hearing one of my most honoured teachers, Dr. Sutton, say that the best classification of disease, or at least a good one, would be into the diseases which attend growth, those which attend maturity, and those which attend decay. An organ in its period of decay, of senile atrophy, becomes subject to morbid changes which did not affect it in its period of activity. The uterus, when in decay, its time of work past, is liable to get distorted, its canal blocked, and accumulations of fluid in its cavity. But I intend to speak only of the functionally active uterus. There are also cases in which the uterus, so to speak, gets involved in conflagrations arising outside it; is seized by adhesions, and pulled this way and that, and so bound and fettered that it cannot do its work; or it is made the sport of intruders which have sprung up within it or by the side of it; tumours of different kinds, which bulge it, twist it, and press it aside, and so deform and distort it in innumerable ways. I do not, in the remarks which follow, refer to these. They are more interesting to the pathologist than to the practitioner, for they are for the most part quite irremediable. In a natural system of pathology, their place is along with the disease producing them, as effects of inflammation or effects of new growths.

I speak here only of cases in which the uterus, except for the displacement, is healthy, or presents only morbid changes of a trivial kind; in which it is movable, is not deformed by new growths, is functionally active, capable of menstruation and of pregnancy.

In so limiting the subject, I put outside flexions of the uterus; for, except when the uterus is thinned by senile atrophy, or held firm in a bent position by adhesions, I know of no morbid effects from flexion of the uterus.

Looking at cases of uterine displacement from a clinical point of view, broadly, they form a group, from which extreme cases may be picked out. On further studying this group, we find that cases intermediate between the extremes are constantly met with. Let me sketch these extreme cases.

On the one hand we have a robust woman, whose vagina is turned inside out, and forms a bag of dry, scaly, probably in places ulcerated, mucous membrane hanging between her thighs, and containing at the bottom of it the whole uterus and the greater part of the bladder, as well as other structures which ought to be in the abdomen. This protrusion she feels as an inconvenience; and she complains also of other local symptoms that I need not further particularise; but, excepting for this purely local trouble, she is quite well. She performs all her household duties, and probably follows some

laborious occupation in addition (for it is in the labouring classes that these cases usually occur). When medical skill has provided her with a support that keeps the inverted vagina somewhere near its proper place, she says she is quite well.

Contrast this with the opposite extreme. Here we have a patient who is a chronic invalid. She is pale, somewhat anæmic. She cannot eat, and is constipated. She cannot sleep, or her sleep is disturbed, and she wakes unrefreshed. She is nervous and anxious; suffers from headaches; is low-spirited, suffers from a vague feeling of dread; cannot concentrate her thoughts. She suffers from pelvic aching, bearing-down pain, much like that which the former patient describes; but, unlike her, she notices no protrusion; and although she thinks there is something the matter with the womb she has formed no idea what it can be, and probably magnifies the importance of the unknown malady. When she is examined, all that is found is that the uterus is rather low in the pelvis, with its body reclining backwards, and when she strains the whole pelvic floor descends more than it does in the healthy virgin, the uterus descending with it. Lastly, both patients have this link in common, that after sufficient recumbency the pelvic aching, &c., disappear, and that they both are also relieved by a support which props up the descending part.

In the one case we have extreme local changes and only slight and purely local symptoms; in the other, comparatively insignificant local changes, and a great array of general as well as local symptoms.

The first case is simple as to its diagnosis and treatment, and comparatively simple as to its pathology. No one will question that the displacement is a disease, or that it is the cause of the patient's symptoms.

The second case is very difficult in all respects. If the patient were capricious enough to consult a number of different specialists, it is possible that the views taken of her case might be conflicting. One theory, called "the mechanical system of uterine pathology," might be applied to explain the totality of her ailments. According to this ingeniously constructed system, in such a case as I have described, the uterine displacement is the beginning, the foundation of the whole, and all treatment that does not succeed in putting this right can only have a slight and temporary effect. So long as the change in position of the uterus is neglected, treatment is being directed to the effects of the disease, not to the disease itself. The scientific treatment is to remove the cause, namely, the displacement, and then the effects will cease. Here we have a theory of the case which is at least clear, definite, and coherent. But the patient might, seeking for wisdom in a multitude of counsellors, find her way to some one who would say that the uterus, in such cases, should not be considered; it may be allowed to lie where it likes. A bend in the uterus is of no more consequence than a bend in the finger. The patients are out of health, and, being women, they think there must be something the matter with the womb. The theory that it is a displacement of this organ is so simple, seems to explain so well their abnormal sensations, is so fascinating from its simplicity, that it quickly takes possession of the patient's mind, and, once there, is hard to dislodge. Treatment of what the patient thinks is the cause of her symptoms inspires her with hope and confidence, and so aids the effect of the treatment of other kinds which is really essential.

I wish, in the time now at my disposal, to show what I take to be the pathological relationships of uterine displacements. I think that analogous morbid changes are found, under analogous causal conditions, in other parts. Let me repeat, for the sake of clearness, that I regard flexion in a functionally active and movable though displaced uterus as being of no greater importance than, say, the bends in a varicose vein. The tortuosity of varicose veins is a characteristic feature of the disease, but not an important one. So in slight uterine prolapse flexion is frequent but not important.

I will put my view in the form of an apparent paradox. Uterine displacements are not diseases of the uterus. They may be classified for convenience as uterine diseases, just as cerebral hæmorrhage is classified among nervous

diseases. But cerebral hæmorrhage is primarily a disease of vessels, not a disease of nerve tissue, and uterine displacement is not a disease of the uterus, but of the muscular and fibrous structures which support the uterus, and its place in a pathological nosology is with diseases of muscular and fibrous structures generally.

It may be asked, What are the structures which support the uterus? If we keep within the limits of our knowledge, we cannot go further than to say that it is supported by the pelvic floor as a whole. In the natural action of the muscles they do not contract singly and independently. Each movement is effected by the combined action of a group of muscles, the action of which is assisted by the fasciæ between and over them, and we cannot separate and define exactly the part which each particular muscle plays in the combinations of which it forms a part. So in the pelvic floor we cannot isolate the part taken by each muscular bundle and sheet of fascia.

To say that the uterus is supported by the vagina is no answer, because the question immediately comes, What supports the vagina? To say that it is supported by the perineum is to flatly contradict clinical facts. The pelvic floor is the support. This is mainly muscular, and the great muscle in it is the levator ani; but we can no more define the share taken by each component of it than we can define the extent to which each muscular bundle in the spine helps to keep the spine erect. The uterus is, in fact, a part of the pelvic floor. This pelvic diaphragm is split into two valves by a slit, and the uterus is set at the top of this slit, and tends to slip down into it when the pelvic floor is weak.

The pelvic floor has to continually sustain the intra-abdominal pressure—a pressure constant in the usual erect posture, much increased by exertion, slight or absent when lying down. If the pelvic floor is not strong enough to support this pressure, then it gives way at its weakest point, and this is the slit at the top of which lies the uterus; and so the uterus becomes displaced. If this be a correct statement, then the causes of uterine displacements may be described, in other words, as the causes which make the pelvic floor weak.

As in other animals and in plants, variations occur in the human body. The extent of surface occupied by the origins and insertions of different muscles differs in different subjects, and consequently the relations of these parts to one another. The abdominal rings, through which the common kinds of hernia protrude, are larger in some persons than in others, and variations in their size bring with them a greater or less proclivity to hernia. One formation of the inguinal canal will make a young man, notwithstanding a sedentary life, liable to have a large but easily reducible scrotal hernia; another formation will protect a person from hernia altogether; while a third conformation will prevent the formation of a big hernia, but expose the patient to much risk of strangulation of a small hernia.

The inguinal canal is not the only part in which anatomical variations occur. In some women the uterus comes down more easily than in others. We sometimes, though rarely, see in otherwise healthy young virgins, who have never followed any specially laborious occupation, the vagina completely inverted, and containing the uterus and other parts. It is difficult to account for such a condition in such a patient on any other supposition than that of a congenital peculiarity in the anatomy of the parts such as to favour descent of the uterus and vagina. Such a case is, as to its pathology, strictly comparable to that of a large scrotal hernia in a young man. There is a resemblance also in the general character of the symptoms, which in these cases, as a rule, are local only.

The structure of the pelvic floor may be altered by injuries received during parturition. A good deal has been written to describe special injuries resulting from this process, recognisable during life, and having prolapse for their ultimate effect. Without criticising in detail, I may say that I do not think more has yet been shown than the well-known general fact that women who have had children are more liable to prolapse than those who have not.

There is no special injury which we can identify during life and can say of it, "This will inevitably be followed by prolapse. If we can prevent or repair this, prolapse will not occur." In this one respect an analogy with hernia cannot be pointed out, for there is no frequent traumatic process by which the canals through which herniæ protrude are made wider; but in the essential features of their pathology all cases of extreme uterine displacement and many cases of minor uterine displacement are entirely analogous to ordinary herniæ. In one the bowel is the part chiefly displaced, in the other the uterus.

It may at once occur to some one that, in drawing this comparison, I have left out of sight the liability to strangulation. The analogy strictly holds good, the difference being only one of degree. When the cervix uteri is protruded from the vulva, it is the rule to find it swollen, bluish, œdematous, and ulcerated. It is true we do not see strangulation producing dangerous suspension of function, but we do see obstruction to the circulation from compression by the boundaries of the orifice through which the protrusion has taken place. Further, a very small hernia may get strangulated, and likewise a slight displacement of the uterus may lead to considerable interference with the circulation through it. If the peritoneal folds which run from the uterus to the sacrum are close together and tense, and the uterus gets turned backwards, and its body pressed down between these bands, the vessels which return the blood from it and run outwards from its sides will be subjected to pressure from these bands, and thus the return of blood will be impeded, and swelling and tenderness of the uterus will be the result. It is only the minority of herniæ that ever become strangulated, and it is only in a very small minority of cases in which the uterus is displaced backwards that these peritoneal bands are tight enough to press upon the vessels enough to obstruct the circulation. The disposition of the pelvic peritoneum varies quite as much as—indeed, I think a good deal more than—the anatomy of the inguinal regions.

If it were my purpose to enlarge upon the parallel between mechanical disorders of the uterus and of the bowel, I might point to the close analogy between inversion of the uterus and intussusception of the bowel, and between the interference with uterine function which may result from fixation of the organ in an abnormal position by adhesion and the intestinal obstruction which sometimes results when the bowels are dragged upon or compressed by similar adhesive bands; but these analogies are so obvious that I need not do more than mention them.

The proper place, then, in a pathological nosology, in which some cases of uterine displacement should be put, is among the hernias, that is, in a class of diseases primarily due to anatomical formations different from those which are usual. Cases of great prolapse belong to this class. We do not know what the precise differences are which make one woman have a prolapse or uterine hernia, and another not; but when we find the vagina turned inside out in a virgin of twenty-five who has never done harder work than nine out of ten girls of her age, it is an irresistible inference that there must originally have been some anatomical defect. When we see a complete prolapse rapidly develop after a confinement in a previously healthy woman, it is an equally rational inference that the prolapse is due to injury of the structures which should support the uterus, although we cannot specify what the injury is.

These cases have these features in common; they are clinically quite simple. No one questions the reality of the disease. If the patient went to twenty different doctors, they would all make the same diagnosis, and treat the patient in practically the same way. Treatment, although not ideally successful, because it only succeeds in replacing a great inconvenience by a less one, yet is able to put the patient in comparative comfort. Local treatment alone is quite sufficient, and nothing but local treatment will do good.

I have been speaking of major displacements, which often produce few symptoms, and I come now to speak of minor or even doubtful displacements with many symptoms.

I suppose most practitioners of large experience have met with cases such as I have described, in which, although the local symptoms which go with prolapse were present, yet there were also many others—disturbances of digestion, of the nervous system, of the circulation, &c. ; and minor changes in the pelvic organs, besides a slight change in the position of the uterus. Thus, for instance, not only is the uterus retroverted, but the cervix is eroded, and the ovaries tender.

Here there are two very opposed views, to which I have already alluded, that might be taken ; the one that the uterine displacement is the centre and foundation of the whole malady ; the other, that it may be wholly left out of account. Besides these, such is the difficulty of tracing the pathology of these cases, that a variety of other opinions might perchance be obtained about such a case. One specialist might hold the chief ailment to be endometritis, another would perhaps point out the tender ovaries, and call the case chronic ovaritis. Across the Atlantic all the symptoms might be put down to a scar on the perineum, or on the cervix uteri. If the patient thought such divergence of opinion a reason for avoiding uterine specialists, she might find her case regarded as one of dyspepsia ; some would evade all difficulties of diagnosis by labelling the case hysteria or neurasthenia, or, a little more precisely, a visceral neuralgia ; and it is even conceivable that some medical Alexander would cut the Gordian knot which others had endeavoured to untie by saying that there was nothing the matter.

Of course the patient may be an impostor, and her statements untrue ; but that is not common. It may be that the patient has been wrongly treated, or too much treated, so that, although her complaints are real, it may be better that she should be left untreated, that she should if possible be got to think that there is nothing the matter, and therefore to pay less attention to her symptoms. But to say that there is no disease worth treating does not explain the morbid condition. In such cases it is only natural that each medical man to whom the patient goes should think the morbid condition to which he has paid most attention, and which therefore he is able to treat with most success, the one which he should begin by attacking. The variety of possible opinion is the measure of the difficulty of diagnosis.

Now, some of these troublesome and complex cases have this feature in common ; that when a support is adjusted which prevents the uterus from sinking down, the patient is relieved. When the uterus is kept permanently supported, and such other treatment as may be required is carried out, the patient gets well. When the patient is well, the support may be left off, and the patient continues well. But examination shows that the uterus is in very much the same position that it occupied when the treatment was begun. It may be said that such a course of events proves that mechanical treatment was unnecessary. But so long as comfort can be promised to patients by the wearing of a support, and that promise fulfilled, so long will medical men use them. What has to be done is to explain how and why they act, and to prevent their abuse by defining their utility.

I take these cases to be essentially similar in their pathology to certain other diseases of muscular and ligamentous structures which have been familiar to the profession much longer than uterine displacements. The disorders to which I refer are weak spines, the slighter cases of lateral curvature of spine, weak knees, and the slighter cases of knock-knee, weak ankles, and the slighter cases of flat foot. Uterine displacements might very properly be collectively denominated, at least in their slighter phases, "weak pelvic floor."

These diseases all consist in a yielding of muscular and ligamentous structures, and each occurs at a time of life and in circumstances when strain coincides with weakness.

They begin usually about puberty, the time at which increased activity and diminished repose go with increased weight of the body, and also what is important, increased strain upon the nervous system. While flat foot and

knock-knee are more common in the male, for the evident reason that work involving much strain on the feet is usually done by men or boys; lateral curvature of the spine usually occurs in the female sex. It often, it is true, dates from an early age, and is associated with rickets. But no one questions that a large number of cases are due to muscular debility. The different opinions as to the proportion of cases which are of this kind is partly due to difference in nomenclature. A case that one surgeon would pronounce to be an incipient lateral curvature, another would call only a weak back; and there are cases of all degrees intermediate between cases of weak back in which no one would discover a curve, and curvature evident to any one who looks. Chronic backache in women is so common, that an eminent female physician has said that women might be divided into women with backs and those without them. This backache is generally, I think, due to muscular weakness, to a tired condition of the muscles which keep the body erect; but there are many cases in which it comes from pelvic disease, and many others in which it is due to both causes. The frequent combination of lateral curvature of spine with disease of the pelvic organs is mentioned by most authors who treat of the former disease. So that it would not be very unreasonable to include lateral curvature in works treating of female diseases. The pronounced curves go to the surgeon, the weak backs often to the gynæcologist.

I do not maintain that the parallel between curvature of the spine, knock-knee, flat foot, and uterine displacements holds good between the conditions compared in all their kinds and degrees. Points of resemblance could be found between an extreme case of lateral curvature of the spine and an extreme case of prolapse of uterus and vagina. But to search out these would only be an exercise of ingenuity leading to no practical result. But there are many morbid processes which are alike in their beginnings, though in their subsequent development they become very unlike. The same morbid process, affecting different parts, and going on to produce in these parts all the morbid changes which it may produce, or render the part liable to have produced in it by other causes, may lead to diseases which at first sight have scarcely anything in common. Thus cerebral hæmorrhage, aneurysm of the aorta, and senile gangrene of a foot differ from one another quite as much as lateral curvature of the spine differs from uterine displacement; yet if we want to prevent these diseases, the task in all three is the same, or at least includes as a large part of it the same thing, namely, to prevent atheroma.

What I venture to assert is that the majority of cases of minor uterine displacements are ailments consisting in muscular weakness—ailments allied to the morbid conditions I have mentioned, in that these diseases also are, at least in many instances, products of debility of muscular and ligamentous structures. I do not say all cases, either of the uterine, spinal, knee or foot deformity.

Just as in cases of spinal deformity there is a period in which the muscular weakness is the principal feature, and the spinal deformity so slight that two unprejudiced surgeons might hold different opinions as to whether there was spinal deformity at all or not; so in the history of uterine displacements there is a stage in which the weakness of the pelvic floor is the main condition, and the uterine displacement slight or doubtful. Later on the spinal deformity may have become great and striking, and productive of inconvenience, and even of disease of various kinds, while the muscular weakness is no longer noticeable. In like manner we may have great prolapse persisting after the patient has recovered from the debility which occasioned its occurrence.

As there is a parallelism between uterine distortions and displacements due to adhesions, and preventing the organ from properly fulfilling its functions, and intestine the proper action of which is interfered with by the traction of adhesions, I might go on to point out that there is an analogous class of spinal deformity produced by the results of inflammation outside it—the

spinal deformities which follow certain diseases of the lungs and pleuræ. This, however, is not my main subject.

All these diseases—weak spines, weak knees, weak ankles, flat feet, and weak pelvic floor—are alike in this, that they occur in the weak and not in the strong; and they are often accompanied by functional failings of various kinds, but alike in being manifestations of debility. The symptoms are alike in general character, although there are of course local differences. The diseases also present a general resemblance as to their course and their treatment:

1. They are essentially similar in their conditions of origin. The conditions under which muscular and ligamentous structures are apt to give way are when, together with increased pressure upon them, the general nervous tone is weakened. The period of life at which the weakness of the spine and limbs becomes felt is during the years which follow puberty, when the boy or girl is ceasing to be considered a child. The boy goes into a situation or into the workshop, the girl perhaps behind a counter, and the principle which there regulates the appointed hours and expected duties is simply that certain work must be done, and it is for the worker to do the work, or make room for someone else. Then with this change in circumstances there goes growth, leading to increased weight, especially of the upper part of the body. At this time, too, occurs the development of the sexual organs. Those occupations which involve great exertion or great activity, much standing, walking, and weight-carrying fall to the male sex, and in them therefore we find most often weakness of the structures of the foot. There are other occupations in which, while the body has to be held upright for long hours during which the wearied muscles crave for rest, the muscular system is but little developed by exercise, and the fresh air and sunlight which ought to send healthy blood to the tissues are only to be had much diluted—the sunlight struggling through window panes and curtains, the air loaded with smoke and organic matter. Occupations unhealthy in these respects are mostly those filled by women, and it is in women that weak spines are most often seen.

Uterine displacements occur chiefly at a later time of life; but this is easily explainable. The increase of the pressure within the abdomen due to growth is quite trifling compared with the increase in the strain upon the feet when an ordinary schoolboy is called upon to stand and carry heavy weights for twelve or fourteen hours daily, and trifling also as compared with the increase in pressure which pregnancy brings with it. It is usually under the strain of pregnancy that the pelvic floor begins to yield. But increased pressure is not the only factor. It is increased pressure acting upon weakened parts. There is loss of tone in the muscles, primarily due to the nervous system. The power which muscles exert does not depend upon their size, but upon the amount of nervous energy sent to them. In the same person, in different states of health, different degrees and duration of muscular tension are required to produce fatigue or painful feelings of strain. When the nervous tone is lowered, not only are muscles weakened, but painful sensations resulting from their tension are sooner felt, and occupy a larger portion of consciousness.

In the case of uterine displacements, not only is the pelvic floor exposed to pressure during pregnancy, and stretched and torn during delivery, but many women during the months which follow delivery have to struggle against circumstances which tend greatly to lower nervous tone. There is the drain of nutritive fluid which the production of milk involves. There is the disturbed sleep and the anxiety attending the care of the young infant; and, in the case of the poorer classes, increased physical exertion in the lifting and carrying the child, and household duties are increased in ways that need not be specified.

A popular lady novelist in one of her books[1] makes a doctor say, "I find

[1] Mrs. Burnett, "Through One Administration."

my difficulty in fashionable children who kill their mothers, and in little simpletons who break down under the sheer weight of their maternal nonsense." Taking out the word "fashionable" and understanding the word "kill" as an example of hyperbole, I think this quotation truly describes facts.

These different forms of disease—lateral curvature of spine, flat foot, knock-knee, and uterine displacements are alike in this, that they are often due to conditions of debility which lead to relaxation of muscular and fibrous structures. The analogy does not stop here. It extends to the cause of the debility, which is often the excessive expenditure of energy called for by the function of reproduction. That the strain of pregnancy, labour, lactation, and the cares of maternity is the most frequent cause of uterine displacements is an assertion which will surprise no one. The share of the male in propagating the race is so small that evil results from the activity of this function are seldom met with after maturity has been reached. But during adolescence, the premature and excessive exercise of the sexual organs frequently is one, if not the chief, among the conditions which lead to muscular weakness. Thus Mr. Barwell, in speaking of the treatment of flat foot,[2] mentions among the hindrances to its cure "some weakening drain upon the system, irredeemably vicious habits," and our President[3] has described a form of "late rickets" which occurs in connection with debility produced in the way to which I have alluded. He says that this disease is chiefly marked by yielding of ligaments rather than by conspicuous bony changes, that knock-knee and flat foot are among the common and earlier signs of late rickets, and that a large proportion of cases of lateral curvature in males is due to this cause. Sir James Paget, in his lecture on "Sexual Hypochondriasis," a condition often produced by habits such as underlie late rickets, says, "especially there is likeness between the men with this disease and the women who have uterine disturbance."[4] The diseases I have compared are thus alike in being indications of debility induced by closely allied causes.

2. They are alike in their accompaniments. The large majority of the cases of the minor uterine displacements complain of loss of appetite, flatulence, fulness after food, and constipation—briefly, of atonic dyspepsia. Their frequent concomitants are also increased frequency of the recurrent headaches from which women so commonly suffer, disturbed sleep, failure of memory, nervousness, lowness of spirits, confusion of thought, neuralgic pains in the face, intercostal neuralgia, hysterical seizures, fainting fits, drowsiness, coldness of extremities. In lateral curvature of the spine, "especially those which occur in growing girls," Mr. William Adams says that "practically we know that patients afflicted with spinal curvature frequently suffer from indigestion, with pain at the stomach, loss of appetite, sickness." "Hysteria is also one of the most frequent complications of spinal curvature, leading to an exaggeration of the general symptoms already described.....a more unsatisfactory and unmanageable complication it is impossible to meet with."

3. The symptoms of these diseases are alike in general character. Overstretching, or fatigue of muscular or ligamentous structures, produces in them a continuous aching, not a sharp paroxysmal pain; and this aching more or less quickly subsides when the strain is taken off.

In the minor uterine displacements the one constant symptom that all cases have in common is this aching, dragging, bearing-down pain, which is relieved by lying down.

The most detailed account of the symptoms in the class of cases to which I assert that the minor uterine displacements are in their pathology parallel, is given by Mr. Warrington Haward.[5] His remarks apply to the spine, but,

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[2] "Club-Foot," 1863, p. 73.
[3] Mr. Clement Lucas, *Lancet*, 1883, vol. i., p. 993.
[4] "Clinical Lectures and Essays," second edition, p. 285.
[5] "Orthopædic Surgery," 1881, p. 146.

mutatis mutandis, they might apply also to the uterus. I ask pardon, on this account, for rather a long quotation.

"In the majority of the slighter cases, the spinal curvature is only a part of a general debility, and the patient's sufferings are often due more to the debility than to the condition of the spine; and I have frequently observed that when the spinal curvature is due to mechanical causes, such as the shortening of a lower limb from fracture, little or no inconvenience is felt from it.

"That slight and early cases of lateral curvature are often attended with considerable pain, I do not in the slightest degree deny; but I wish to combat the notion that the pain depends upon the mere changes in the relative positions of the vertebræ, the mechanical treatment of which is all that is necessary. That this is not the cause of the pain must I think be obvious to anyone who will compare the acute suffering complained of by many delicate girls in whom there is but a slight degree of lateral curvature, with the entire absence of pain seen in the numerous cases of far more pronounced curvature depending upon infantile paralysis, old hip disease, or other cause of shortened lower limbs wherein advice is almost invariably sought because of the deformity, and not because of any pain which is caused thereby.

"The cause of the pain must then be sought elsewhere than in the altered position of the bones; and a consideration of the pathology of the deformity will, I believe, show that it depends upon a similar cause to that which gives rise to the pain in flat foot; that is to say, upon the undue stress thrown upon the ligaments in consequence of the muscular debility, and upon the increased nervous sensibility of the weakened and over-stretched muscles.

"It must be remembered that the spine is held erect not by its ligaments but by its muscles; the ligaments do but hold the bones together and check undue mobility; wherefore, if the muscles are unequal to supporting the weight thrown upon them, the ligaments suffer for lack of their aid, a stress is thrown upon them for which they were not intended, and pain is the result.

"The pain suffered in these cases is chiefly of an aching character, such as is usually produced by the slow stretching of fibrous tissue, and it is felt in the spine itself; but to this is often added the discomfort, which may even amount to actual pain, of great muscular fatigue.....Moreover, it is necessary to bear in mind that the word 'pain,' has no constant value; and that the degree of pain in any given case depends, not only upon the potency of its cause, but also upon the sensibility of the sufferer."

4. These diseases have a general resemblance in their course. If they persist long, and the causal conditions continue in operation, the mechanical changes go on to the production of extensive deformities. But if they are early properly treated the condition will improve. If the deformity or displacement be slight, the patient may regain perfect health, notwithstanding that the slight deformity or displacement remains.

It is commonly believed that spontaneous arrest of spinal curvature often takes place; and the frequency with which slight curvatures are seen when the chest is stripped, in patients who do not seek advice on account of spinal disease, seems to me to justify this belief. An essential condition for arrest of spinal curvature is, says Mr. William Adams, "muscular strength and a robust condition of the general health;" and also, that the curvature be one produced at a late period, that is, not one due to inherited peculiarities or to disease of bone. This exclusion of cases in which the curvature arises early is the exclusion I should have wished to make for the purpose of my parallel between spinal curvature and uterine displacements.

In the case of flat foot, the same general statement as to prognosis applies. As to this disease, Mr. Adams says "dancers frequently exhibit this condition, but suffer less in consequence of their great muscular strength in some degree compensating for the weakness of the feet."

The frequency with which the slighter forms of prolapse are cured is difficult to state with precision from direct observation, for several reasons. They are

chronic, last long, and they affect organs the examination of which is repugnant to the patient, and therefore it is seldom that the patient who has been treated for a disorder of this kind will be so considerate towards the physician's scientific zeal as to let him examine her from time to time to ascertain what is the position of the womb.

Displacements of the uterus are most frequently met with towards the end of the child-bearing period. The strain of frequent child-bearing, involving repeated violent stretching and tearing of the pelvic floor, leads to its yielding.

Out of 154 cases of backward displacements of uterus, I find the following distribution as to age :—

Under 20	3	or 1.9 per cent.
20 to 25	25	,, 16.2 ,,
25 ,, 30	32	,, 20.8 ,,
30 ,, 35	33	,, 21.4 ,,
35 ,, 40	25	,, 16.2 ,,
40 ,, 45	17	,, 11.0 ,,
45 ,, 50	13	,, 8.4 ,,
50 and upwards	5	,, 3.2 ,,

Taking the age at which the symptoms began, in 65 I find :—

Under 20	5	or 7.7 per cent.
20 to 25	13	,, 20.0 ,,
25 ,, 30	28	,, 43.0 ,,
30 ,, 35	6	,, 9.2 ,,
35 ,, 40	8	,, 12.3 ,,
40 ,, 45	4	,, 6.1 ,,

So that the age at which most of the displacements came for treatment was between 30 and 35. The usual time for symptoms to begin was from 25 to 30. Although the years between 30 and 35 are about the middle of the period of possible child-bearing, yet they are nearer the end of the period of actual child-bearing ; for statistics[6] show that the years between which the largest number of children are born are between 25 and 29 : and that only a small minority are born of mothers over 35. If it were the case that the uterine displacements, once begun, always required the continual use of mechanical support, we ought to find the number of patients suffering from these displacements increase with increments of age. But after 40 the number of patients applying for treatment on account of slight displacements is comparatively small.

5. There are yet other features about all these disorders which they unfortunately have in common. One of these is that it is very difficult to distinguish slight cases of these forms of ill-health from other slight ailments due to different causes. There are many cases in which one surgeon will declare orthopædic appliances necessary, while another will think them hurtful. Difference of opinion about points of practice is not uncommon in our art, and is no discredit to it. To borrow a metaphor lately used by a political leader, controversy is the surf which marks the advancing tide of progress. And this surf beating on the shore which the wave only intermittently covers, makes a great deal more noise than the steady swell of the sea over land which is completely submerged, and its white line is visible when it is too dark to otherwise distinguish sea from land. So diseases which can be identified with precision and treated with certainty do not furnish material for assertions which astonish the cautious and call forth indignant rhetoric in reply. That which gives acerbity to the points of controversy now before us is that the mechanical treatment sometimes necessary for the support of weak spines and displaced uteri is, unfortunately, if it be not necessary, very objectionable. Thus Mr. Barwell writes :[7] "There is hardly a malady in surgery so liable as spinal curvature to be imputed to perfectly healthy girls, nor for which so many, innocent of all disease, have been subjected to long treatment ; while very many more young

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[6] Duncan, "Fecundity, Fertility," &c., Tables ii. to v.
[7] "Curvatures of the Spine," third edition, 1877, p. 207.

women so slightly affected as to require only a few months' easily borne management have been irreparably injured both in health and happiness by being laid upon couches, forbidden healthy exercise, and fastened into steel machines."

A great gynæcologist writes thus about pessaries:—"Think twice before beginning the often baneful practice of using any instrument." But the harm that may be done by attaching too much importance to the mere changes in the position of the uterus should not make us go to the other extreme and attach too little importance to them.

In the cases which are so common, of slight displacement, together with many nervous symptoms, the pathological history is somewhat as follows. From the combined effect of influences which debilitate the nervous system, together with increased pressure upon the pelvic floor—a combination usually produced by child-bearing, and in which the first-named factor is the most influential—these muscular and fibrous structures yield. They become stretched; they ache, and they let the uterus slip down. The same conditions of debility which prevented the pelvic floor from receiving the supply of nerve force necessary to enable it to continuously sustain the intra-abdominal pressure also produce defective function in other parts. Digestive power is impaired. There are also symptoms arising from the condition of the nervous system itself. One effect of the weakened nervous system is its increased susceptibility to pain. In consequence of this, the pelvic dragging and aching due to the stretching of the weak muscles and fasciæ become magnified into a constant torment—magnified in two ways. First, the painful sensations borne by the afferent nerves occupy a larger space in consciousness; the amount of pain felt is greater: and, secondly, these painful sensations are represented to the mind of the patient and magnified by her fears into the symptoms of a malady all the more terrible because its precise nature is not evident. The discomfort which locomotion produces leads the patient to avoid it, and so to the causes of debility already existing are added want of light, fresh air and exercise. Thus one slight morbid change produces another, which in its turn reacts upon and aggravates the other, and until at some point the morbid chain is broken, the patient's condition does not ameliorate.

6. There is another feature which these diseases have in common. Although symptoms accompany the deformity or displacement, they do not depend upon it, but upon the debility which occasions the alteration in the shape of the parts. It is the over-stretching of weak ligaments and muscles and the effect of such over-stretching on an over-sensitive nervous system that constitutes the patient's suffering. If the nervous system be strong, the same strain thrown on these same ligaments and muscles produces no complaint. Busch[8] mentions a case in which a man with severe scoliosis was accustomed to carry heavy pianofortes, and "had with his prominent shoulder lifted quite five hundredweight." He appropriately remarks: "Victor Hugo, therefore, does not err when he ascribes to Quasimodo, who is afflicted with congenital scoliosis, enormous bodily strength." Our own Dickens, in his creation of Quilp, has certainly not made him an invalid. I have known a newspaper reporter whose knock-knees gained for him the descriptive nickname of "Letter K"—a comparison which, taken as descriptive, was erroneous as not indicating sufficient deformity. Yet this man spent his day in walking about from place to place in search of material for "copy," and late in the evening showed no signs of weariness. Many people have feet quite as flat as many others for whom valgus boots are necessary, and yet experience no trouble from them. So in the case of the uterus; in many cases of slight displacement, with symptoms enough to make the patient an invalid, after the symptoms have gone the uterus will be found in about the same position as it was before.

It may be said that in these slight displacements the whole thing is nervous. It is true that relief follows the introduction of a pessary; but would the same relief follow if the pessary were introduced without the knowledge of the

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[8] "Ziemssen's Handbook," vol. v., p. 159.

patient, say under chloroform? Individual cases in which unnecessary treatment has been practised prove nothing more than that some one made a mistake. It must be admitted also that the mere fact that a particular patient thinks that a pessary did her good is not of the slightest value as evidence.

The question at issue is one of those which must be decided by appeal to the ultimate test of common experience. If we find that prompt relief to definite symptoms can be definitely predicted from the use of a pessary, and that the prediction is fulfilled, that, I think, is strong evidence that the benefit is not due merely to the patient's imagination. If we find that treatment of other kinds does not relieve local symptoms, but that, the patient otherwise leading the same life and taking the same medicine, relief follows mechanical treatment, that is a presumption that the relief is due to the fresh element in the treatment. There are cases in which, by treatment in hospital with rest in bed, we can relieve the symptoms without a pessary, and without altering the position of the uterus; but after the patient has been for a time under the old influences, the symptoms return, and are then relieved by a pessary. These experiences are frequently repeated. It is not always enough to aim at enabling the exhausted nervous system to recuperate itself. In some cases this may be enough, but in most cases treatment directed to this end will be more effective if the local discomfort be removed. Just as there are curved spines arising from muscular weakness, which are admitted by all surgeons to require mechanical supports, in spite of the objections to these appliances, so there are cases in which mechanical propping up of the uterus is the most valuable part of the treatment. It no more follows that pessaries are unnecessary because they are often used when they ought not to be, than that spinal supports should be abolished because they have sometimes been prescribed without necessity.

The way to limit the use of pessaries is by defining what is to be expected of them. By wholesale repudiation of them we simply strengthen the bad practices of treating headaches, fits, paralysis, vomiting, coughs, insanity, and I know not what else, by putting instruments in the vagina or uterus.

In the quotations I have made from others, as well as in some of the remarks I have made myself, the word "hysteria" has been mentioned.

I wish that a distinction were more generally made between hysteria, understood as meaning a liability to the well-known hysterical seizures, and hysterical, that is, nervous mimicries of disease. Everyone is acquainted with hysterical paralysis, hysterical aphonia, hysterical blindness, retention, contractions, &c. These words mean that a patient says she cannot walk or speak above a whisper, cannot pass urine, or cannot see, &c. No physical sign of any disease can be found. Under a sufficiently powerful emotional influence, the patient, who said she could not walk, and actually has not walked for months or years, walks in a few days, or it may be a few minutes; the patient who has no voice calls out loudly; the patient who says she could not pass water, when she is judiciously treated, passes it naturally; and in the case of hysterical blindness, by appropriate tests, it can be demonstrated that the patient's vision is perfect.

Now if this sort of symptoms occurred in a soldier who did not wish to go on duty, or a man who wanted to get damages out of a railway company, it would simply be called malingering; but the counterfeited symptom occurs in a young and often attractive girl, who has no gross motive for pretending to be ill, neither disagreeable duty to shirk, nor money to get; on the contrary, it appears, and is the fact, that she loses a great deal of pleasure, and endures a good deal of what most people would call discomfort, by her malady. Also, she is often a young woman of blameless character, of quick intelligence, of affectionate disposition, and of high aspirations; and this excellence of character and exaltation of feeling put far from the minds of her friends the slightest suspicion that there can be any element of imposture in the illness. The young woman is in good health in every other respect, and when the miracle has been wrought which removes her blindness, her paralysis, or aphonia, she is quite well.

These are called hysterical affections. The name of nervous mimicry, which Sir James Paget has applied to them, seems to me a far better one. They occur chiefly in young women, and in young women of nervous temperament; and so do attacks of a different kind, the well-known hysterical paroxysms; but beyond their occurrence in the same class of patients, I see little community between them.

We see cases of women previously perfectly healthy, intelligent, sensible, with vigorous bodies and well balanced minds. Such women, when for long subject to debilitating influences, especially influences such as exhaust nervous energy, become liable, among other symptoms, to suffer from attacks of what is commonly called "hysterics." There is no loss of consciousness, and therefore perhaps the idea has arisen that these seizures differ mainly from epileptic fits in being under the patient's control. But there are phenomena of these fits which are as much beyond the patient's control as the spasms of the epileptic; the patient could not voluntarily produce, for instance, the cold clammy hands and feet. They occur in women who are perfectly aware of the contempt with which people who do not so suffer view anything that they are told is hysterical, and who struggle hard to prevent these fits coming on. A fit of this kind may, it is true, be cut short by a sudden shock to the sensory nerves, as by a cold douche, or the infliction of sharp pain; so may an epileptic fit sometimes, by compression of a limb in which an aura begins. Patients subject to hysterical seizures may also counterfeit paralysis or blindness, but this is all the connection that I can see between the two kinds of disease. The patients who mimic disease are not all subject to hysterical paroxysms, and many patients subject to hysterical paroxysms are too strenuously anxious to fulfil every social, filial, conjugal, or maternal duty in spite of the weakness that they cannot help feeling, to be able to give any thought to counterfeiting symptoms.

The diseases which I have classed as uterine displacements are alike diseases in which we have over-sensitive nerves and weak muscles. Some may say weak nervous system is simpler and shorter and more correct; but I do not think so. A weak nervous system is also over-sensitive; but a nervous system more sensitive than the average is not necessarily a weak one; indeed, often the reverse, for with high intellectual powers there is often very great sensitiveness.

Much has been written about change of type in disease. In the sense that disease has so changed, that where fifty years ago bleeding was beneficial, alcohol is now required, I do not believe that there is any such thing. But in the sense that there are many morbid conditions—now very properly treated—that did not exist three or four hundred years ago, at least in this country, I have as little doubt. The type of patient in whom the minor uterine displacements, and the group of symptoms associated with them, are seen in their highest development, may be found very fully described in the modern American novel. As one of them says, "we are all introspection and retrospection, and we call it being analytical and clever. If it is being clever, then we are too clever. One gets so tired of it, one wishes that one could stop thinking and know less, or more." They are diseases of high civilisation; they affect persons who are accustomed to have everything done for them, and to do little themselves; persons who think and feel a great deal, but act very little. They are diseases of towns, that is of those who are born, brought up, and live in towns not in the country. A description by negatives is logically a defective one; but I think I can scarcely describe the subject of the nervous sensibility and muscular weakness which render a woman liable to become the subject of the diseases I have been speaking about, than by saying that she is the exact opposite of the animal, as described in the following lines, also from an American source, namely, Walt Whitman:—

> I think I could turn and live with animals, they are so placid and self-contained;
> I stand and look at them long and long;
> They do not sweat and whine about their condition;

They do not lie awake in the dark, and weep for their sins;
They do not make me sick, discussing their duty to God;
Not one is dissatisfied—not one is demented with the mania for owning things;
Not one kneels to another, nor to his kind that lived thousands of years ago;
Not one is respectable or industrious over the whole earth.

One might almost think this wish had been the reactionary exclamation of one wearied by seeing too much of American nervousness.

The late Dr. Milner Fothergill wrote a good deal with his accustomed cleverness, on reversion to ancestral types. Were the breeding of human beings carried on with the same attention to the result as in the case of animals, one would prescribe, for the extirpation of these forms of disease, an occasional cross with a seafaring stock. There is an adumbration of truth in the old fable about Antæus getting fresh strength from his mother earth; but one might make an addition to it, and say that mother earth gets fresh strength from the sea. The aggregation of men in towns leads to the degeneration of the race, which would be more plain than it is, were not the town populations continually reinforced by the influx of fresh strength from the country, of new animals, with large frames, strong muscles, and comparative stupidity; the slower brain, nevertheless, doing more and better work, because it is less easily exhausted. But the land, left to itself, is far from being a source of health, it is the home of endemic poisons of various kinds. The monotony of life, where man sees little of his fellow creatures, nothing but the same soil and products of the soil, is very inimical to progress; produces a dulness which is scarcely to be preferred to the excessive mental activity of town life. For the perfect purification of the soil, it is necessary that the salt sea should wash over it; and it is in contact with the sea that man renews his strength, that the race reaches its greatest physical perfection. It is among the seafaring nations that the most perfect development of human nature is to be found. And of the curative agencies that we have in these forms of debility, sea air and sea bathing take the first place.

We see, I think, evidence of the influence of education in producing this change of type, in the complex forms of hysteria which seem to be more prevalent in France and in America than they are in this country and in Germany. Uncontrollable vomiting in pregnancy seems, if one may judge from published cases, to be more common in France than in this country, and more common here than in Germany. It is very difficult to judge correctly as to whether published accounts of disease really represent their actual prevalence, for there are many circumstances which determine the selection of cases for publication, and of diseases for comment, besides their actual frequency. But I think there is good ground for believing that the difference is real. The wealth and luxury of America, the conventual education, with its cultivation of the emotions, and exaltation of asceticism, prevalent in France, tend in one direction; while in Germany the compulsory military training of the men, and the general opinion in favour of the good "*Hausfrau*" as the ideal woman, work in the opposite direction. What is wanted is to secure the advantages of each without its defects. A gardener seeks, by judicious crossing and manuring, to secure not only a beautiful bloom, but a large and hardy plant, for upon the size and vigour of the plant the number and size of the blooms depend. The crossing is not in our hands; but we can do much in altering for the better the influences on which growth depends, and an active mind without a healthy body is generally more a misfortune than a boon.

Over-sensitive nerves and weak muscles are partly inherited, partly the result of training—of a training which, instead of making the child into a good animal, has been, perhaps not intentionally, directed towards developing the mind, and hindering the growth of the animal: a training which develops complexity of nervous structure instead of nervous energy. It is the result of a childhood spent in learning a great deal and doing very little.

The prophylaxis of these ailments must begin in childhood. Those who have influence—and there are none who have more influence than the members of

our profession—over the training of children, should bear in mind that the influence of the surroundings of town life is towards the development of the intellect and the emotions, rather than of the bones, the muscles, the digestive and the blood-making organs. This is especially the case among those who form the *clientèle* of the great majority of general practitioners—the middle classes. Among the higher classes, the attention to physical development in girls is helped by the examples of the great schools and universities in which young men are trained ; and among the lower classes, the necessity for quickly earning money impels the girl to healthy labour. It is in the middle classes that the influence of the family doctor may be most beneficial, in impressing upon parents by whom he is consulted the advantage of healthy muscular labour, of outdoor play, of plenty of food and plenty of sleep, of warm clothing, of activity of body. With an active body will often go an active mind ; but the active mind, the quick perception and retentive memory, should be allowed to exercise itself on things, not on words ; in doing, rather than in thinking or in reading. We want people to recognise that the end of a good education is not to know, but to be able to do. A training which makes women tall and strong and muscular, with good appetites and the power of sleeping well, is the one best for their minds as well as for their bodies. Lawn tennis will do more for the prevention of displacements than pessaries can do for their cure.

Briefly, to recapitulate the purport of this address. I have tried to sketch the pathology of uterine displacements. Some conditions, commonly spoken of as displacements, are not morbid conditions ; these are flexions of a uterus which is free to move, and has walls of natural thickness and lateral deviations of the uterus. There are other displacements which are produced by tumours, or by adhesions, and these are quite subordinate to the condition which produces them, and are irremediable.

Of cases in which displacement of the uterus is the only, or the chief, local change, some are analogous to herniæ. Their history warrants the belief that they depend upon a peculiar anatomical formation, just as a hernia does. Like a hernia their symptoms are local, and their treatment is mechanical. These are the major displacements. They begin as minor ones, and if they are not treated increase, just as a hernia is at first small, and, if not treated, gets large. They occur in the strong as well as the weak.

There are other cases in which the displacement is very slight and the symptoms very numerous. The symptoms are referred to many parts of the body, but the local symptoms are the same as in the former class. These are due to weakness and over-stretching of the muscular and ligamentous tissues which support the uterus. This is due to a condition of debility allied to that which produces lateral curvature of the spine, knock-knee, flat foot, failure of sight from hypermetropia, &c. It may be successfully treated without mechanically supporting the uterus, although mechanical support of the uterus often gives relief. The symptoms are not due to the slight displacement itself, but to over-stretching of the sensitive tissues. The weakness and sensibility of the tissues is due to nervous exhaustion, and when this has been cured the symptoms will disappear although the displacement may be exactly the same. In all these conditions the nervous exhaustion which produces them is often due to the strain upon nervous energy connected with reproduction, although it may be due to other causes. Lastly, the medical profession can do much good in helping to prevent these diseases by urging that in education healthy physical development shall be given its proper place.

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