THE PATHOLOGY AND THERAPEUTICS OF UTERINE DISPLACEMENTS,

(READ IN BRIEF BEFORE THE ACADEMY OF MEDICINE, N. Y.)

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I BELIEVE it is now generally conceded that the whole domain of medicine and surgery, unaided by mechanics, must be inadequate to supply all the desiderata in uterine obliquities, displacements, and their derivative effects, because of their pathology being largely mechanical; and, notwithstanding some of the profession have been driven from an exclusive medicinal treatment, constitutional and local, to various mechanical devices, still, it remains a grave doubt whether, in the aggregate, success has been greatly enhanced by them; to say the least, all the desiderata have not been supplied, and hence I submit a few suggestions touching the reasons for this *partial* success. In attempting this, I shall pretend to no extraordinary professional intelligence; and if I should supply the required light, it will be due to the purely common-sense view which I take of the obvious mechanical forces in the premises, and I shall gladly rest content to leave the departments of medicine, surgery and hygiene in far better hands.

Pathology of Uterine Displacements.

Protracted and extended observation has forced me to the conclusion, that the prevalent pathology of uterine displacements is more or less defective, its ruling idea seeming to be that their physical causes originate within and are mainly confined to the intro-pelvic cavity and tissues, where, to me, it appears *manifest*, that the pelvic contents, in the main, are merely the objective point, and, that the abnormal pelvic status, both primarily and proximately, is caused by a relaxation of the abdominal, dorsal and scapular muscles and ligaments, and by a consequent undue gravitation, not only of the abdominal contents upon the pelvic organs, but also, of the whole trunk, which has lost its centripetal bearings and fallen forward of the spinal axis in consequence of a diminished and unbalanced action of its muscular braces.

To illustrate: by a mere glance at Fig. 1, we see plainly, that the mathematical combinations of such a figure, induce first, a centripetal or centralized state of all the trunkal bearings, or, in other words, a balancing of the whole superior trunk *upon and behind* the spinal axis, or *point-d-appui;* second, a tension of all the abdominal muscles; a consequent expansion of the chest and a protection of the pelvic viscera from abdominal weight by a steady and firm compaction *upwards* of all the viscera. Add to this the fact that the medial plane of the pelvis is comparatively vertical, and the inferior abdominal cavity (*antero-posteriorly*) comparatively small.

By this combination, not only is the descending weight of the whole line of viscera materially impeded, but also, the force of visceral gravity is compelled to fall upon the *pubis*, and not upon the uterus, rectum and bladder in the inferior strait.

On the other hand, a glance at Fig. 2 shows, almost painfully, that a centrifugal state (the very opposite of the former) *revels*, as it were, throughout; for the spine has retreated behind the proper axis of the body, leaving the whole upper trunk to hang forward from the spine, and not to properly swing *behind* or to rest *upon* it as in Fig. 1. This centrifugal combination causes the chest to droop and flatten, the ensiform cartilage to retreat towards the spine, the medial plane of the pelvis to become nearly horizontal like a dish; the distance between the *symphysis pubis* and the sternum to be much diminished and the abdominal muscles to consequently become flabby; also, the inferior abdominal cavity is compelled to be enlarged,

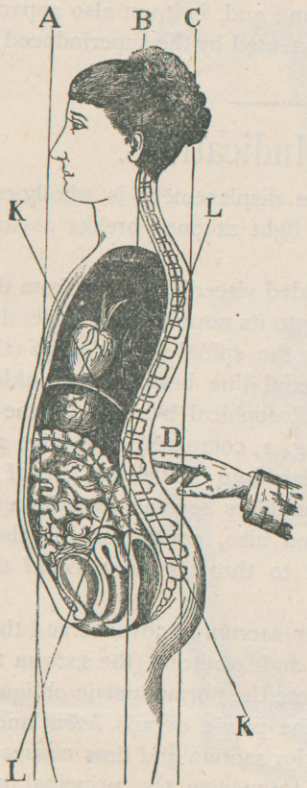

FIGURE I.

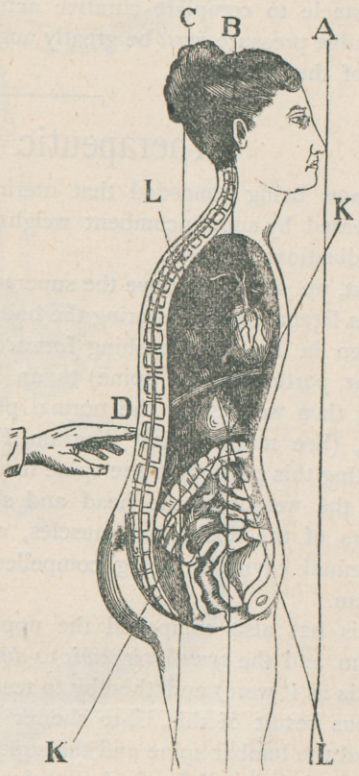

FIGURE II.

Side views of the erect and drooping position, showing the upward and bracing out bearing of the Viscera in Fig. I, and the downward action in Fig. II.

antero-posteriorly, and the head, shoulders and entire visceral series, made to descend, and in consequence, made to press with a corresponding abnormal force upon the uterus, bladder and rectum.

In fact, the contrast between these two figures and their involvements, is complete, and whatever *inherent* causes there may be to produce uterine descent, is it not manifest that such a condition of the middle and superior trunk as is represented in Fig. 2, must greatly *augment* and remain at *least*, an obstacle to complete curative action; and, is it not also apparent, that this undue pressure *must* be greatly augmented by the superinduced horizontality of the pelvis?

Therapeutic Indications.

It now being conceded that uterine displacement is wholly caused or aggravated by superincumbent weight, light at once breaks as to some of the indications of cure.

First, we should remove the superadded visceral burdens from the uterus and its ligaments, by restoring the body to its normal or centripetal bearings as seen in Fig. 1, by pushing forward the spinal *point-d-appui* (the dorso-lumbar portion of the spine) to an axial line between the ankle and the head; thus we restore the normal philosophical bearings of the skeleton trunk, (See mathematical diagram, Fig. 1, compared with Fig. 2.) for by thrusting this portion of the spine forward into the vertical axis of the erect body, the weight of the head and shoulders become *elevating* agents and tensors of the abdominal muscles, and also, contractors of the inferior abdominal cavity, by being compelled to throw gravity *behind* the spinal fulcrum.

This has also compelled the upper sacrum to advance and the inferior sacrum and the *symphysis pubis* to *dip* and to retreat (the sacrum to turn on its axis as it were) and thereby to restore the normal pelvic obliquity. The obvious result of this, is, to shelter the pelvic organs *below* and partially behind the lumbar spine and the superior sacrum and thus causes the pubis and the inferior abdominal muscles to receive the principal abdominal weight, (which is *supposed* to be so burdensome to the uterine ligaments.) Thus then, it is conclusive, that this balanced state of the trunk upon its own spinal fulcrum and this elevated state of the abdominal viscera once established, either by nature or by art, the case is then *changed* from that of a general derangement to a merely local one in the pelvis, and that both inherent and artificial resources are then left to contend *only* with the merely inconsiderable weight of the uterus alone, whereas, before this, they must contend both with the weight of the uterus and that of the whole line of viscera, together with that of the head and shoulders.

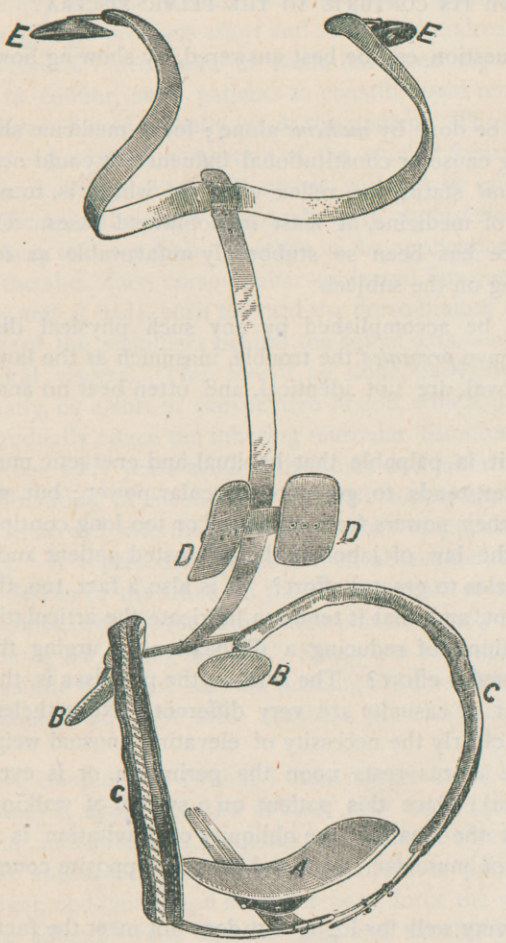

FIGURE III.

THE ABDOMINAL AND SPINAL SHOULDER-BRACE. *A*, front pad, elevating the abdominal viscera.

B B, pads supporting the glutei muscles on either side of the sacrum.

C C, bows or arches of the main-spring, to which all the other parts are attached, rising above the innominatta, and sitting immovably on the body.

D D, aggressive support to each side of the weak lumbar spine.

E E, spring support resting on each head of the Humerus. The combined action of all these, is, to elevate the viscera, sustain the spine in its proper form, and poise the upper trunk *behind* the spinal axis.

BY WHAT MEANS CAN WE RESTORE THE NORMAL RELATIONS OF THE TRUNK AND ITS CONTENTS TO THE PELVIC VISCERA?

Perhaps this question can be best answered, by showing how it *cannot* be accomplished.

1st. It cannot be done by *medicine* alone; for if medicine should remove every predisposing cause or constitutional influence, it could not change the *abnormal mechanical* status, the reflex effect of which, is, to neutralize the legitimate action of medicine, at least in confirmed cases. On this point, general experience has been so stubbornly unfavorable as to silence all opposing reasoning on the subject.

2d. It cannot be accomplished by any such physical discipline and culture as might have *prevented* the trouble, inasmuch as the laws of prevention and of removal are not identical, and often bear no analogy to each other.

To illustrate: it is palpable that habitual and energetic muscular effort, according to order, tends to generate muscular power; but, when muscles have *already* lost their powers from excessive or too long continued exercise, shall we quote the law of labor to the exhausted patient and urge him to stimulate his muscles to greater effort? It is also a fact, too, that motion is the law of a joint, and that it tends to lubricate the articulating surfaces; but, who would think of reducing a dislocation by urging the patient to make strong muscular effort? The truth in the premises is, that the law of function and that of casualty are very different. Nevertheless, there are those who seeing clearly the necessity of elevating unusual weight from the uterus, (when the uterus rests upon the perinæum, or is even protruding through the vulva); place this patient on a system of walking, riding and gymnastics, under the idea that the obliquity or gravitation is produced by a previous lack of muscular effort, and that the opposite course is the true remedy.

This answers very well for logic, but does not meet the facts; indeed, I have had scores of "forlorn hopes" fall into my hands, whom this regimen of logic has reduced to the most miserable helplessness, the muscular effort having increased the uterine descent, when entered upon after the descent had fairly commenced; whereas, in a normal uterine condition such muscular effort may tend to preserve that state; the aggregate of muscular action being then in the ascendant. With me, such cases of improper effort have uniformly borne testimony to an aggravating influence.

Again, this laxity of the abdominal and dorsal muscles has usually been so entirely the result of excessive and protracted effort, that to apply the law of labor to them, as an excitant, is simply absurd; as much so, as to

shout to an exhausted man grasping a rope over a precipice, and unable to turn above the rope :—" Keep on exerting your muscles till they acquire strength thereby to raise you up onto the rope," whereas, the only trouble is, that his weight by previous effort and stress, have already reduced him to helplessness; such, indeed and in truth, has been my observation on this point, that to confine such patients to constitutional remedies and to urge muscular effort is but to actually insult the patient. Thus then, it is evident that in confirmed cases, a correction of the trunkal bearings and the elevation of visceral weight from the uterus will not be effected by muscular effort or medicine, either used separately or in conjunction.

We see then, that our main hope lies in the application of such mechanical force at the shoulders, dorso-lumbar spine and inferior abdomen as shall concordantly and at once, push forward the dorso-lumbar curve of the spine; draw backward the shoulders behind the spinal axis, and elevate the whole line of trunkal viscera. This, *should* be done, partly by *some* force at the first, and lastly, by a sort of provocative action, which, under a proper regimen, will gradually educe the inhering muscular resources. Accordingly, I have for the last forty years made it the study and labor of my life to devise such a combination of mechanism as shall supply the above desiderata, and yet act in accord with the physiological law of muscular education.

See Fig. 3. It represents the combined abdominal, spinal and scapular muscles, or forces of the trunk, in the simultaneous or separate exercise of power, and consists of the following three points, namely : First, an abdominal pad looking and acting *upward.* Second, a steel spring or spine with a supporting saddle or spinal fulcrum pushing the dorso-lumbar spine forward. Third, a shoulder-bow (or steel scapular muscles) looking and drawing backward.

When this combination (which I denominate an abdominal and spinal shoulder-brace) is applied to the subject with settled viscera, a retreating lumbar spine and advanced shoulders, an immediate and general change in the external appearance and internal condition is palpably accomplished, *i. e.*, the spinal, abdominal and shoulder parts force the viscera upward, the dorso-lumbar spine forward, and the chest and shoulders backward, thereby effectively giving relief to the pelvic organs from superincumbent visceral pressure by visceral elevation, waist and chest expansion and the poising of the superior trunk behind the spinal axis. Meantime, it is particularly worthy of remark that all these changes are effected almost in a *natural* way, without restraining the free action of a single muscle, the compression of a single nerve, blood vessel or cartilage, or the constraint of a single motion; but, on the contrary, so concordant, yielding and provocative is the action as to excite the dormant resources to an increased effort.

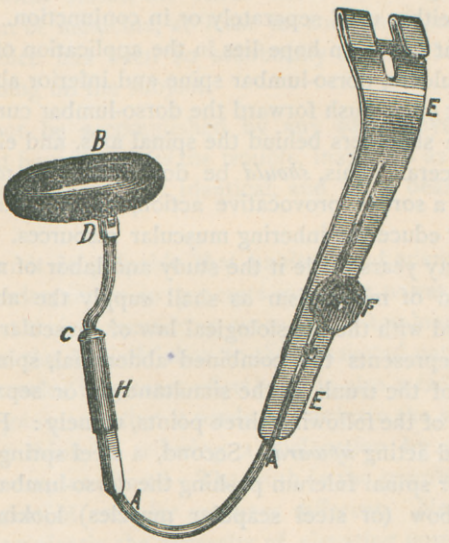

FIGURE IV.

A A, curved shaft to be attached to front bar of the brace, adjustably, and to support the small ring.

B, small rubber or celluloid ring, which fits loosely around the cervix, and by means of a golden spiral wire, gives an undulating action under the jolts of the body.

C, A pinch-screw, by which the ring may be elevated or depressed at pleasure.

D, A hinge, by which the ring may be turned on its edge for easy introduction.

E E, steel slotted pendant, for supporting shaft and ring *B*, when in situ on the body.

F, Thumb-screw for adjusting and fastening the ring at any desired position in the body.

OF SIMPLE UTERINE PROLAPSUS AND PROCIDENTIA.

This simplest and least painful variety of uterine displacements is the most easily met. It consists in a direct descent from the superior to the inferior strait of the pelvis, without either lateral, backward or forward obliquity. Its low altitude in the cavity is the only troublesome fact, and the examining finger shows the descent to have inverted, shortened and expanded the vagina, whereas its most contracted diameter and extended length is requisite. In this low state, the uterine ligaments and their attendant nerves are most tensed, and their insertions tracted. Thus we have a rational explanation of the "dragging," "wrangling," "boring," and "tooth-ache feelings in the back and groins," and the feelings of "openness," "turning inside out," or "feeling as if something wanted to be born at the vulva."

Again, this state does not always stop even here, but superincumbent pressure and constant stress upon the vulva, ultimately so overcome the tissues that the uterus protrudes through and is carried between the thighs through the day like an oblong ball.

CURATIVE INDICATIONS.

Quite commonly, even at this late day, men of renown and gray hairs attack such cases with tonics, order the recumbent posture and apply a pessary.

But the tonics can only give some *general* strength, whilst recumbency in giving *respite* from suffering, tends rather to diminish than to increase muscular tone; and I blush to say that many venerable men carrying out this plan, will spend months and years in calling once or twice a week, and with great solemnity and gravity replace the uterus, and gain a reputation for "great faithfulness" in the case; whereas, it would be as reasonable to place an egg on end on a table so often, in the hope that by and by it will stand.

OF PESSARIES.

Others, a *little* more sensible, (and but a little) resort to pessaries. Of the varieties of these, there is a legion. But no matter what their shape, if they give any support, they must do so by resting for a point of support upon the vagina and perinæum, whilst they *need supporting themselves.* In doing this, they necessarily distend the already relaxed and distended vagina and perinæum, which will gradually recede under their burden, and require a larger and still larger pessary, and thereby, whilst giving *some* relief from the effects of uterine gravitation, they steadily exhaust all the remaining contractibility

in those tissues and thus wear out all hope of their again playing their part in sustaining the uterus in situ.

But not only this ; they often work immense mischief by inducing ulceration and inflammation of the vagina and uterus, and have at times actually ulcerated through the bladder and rectum. I have often traced with my finger, a horizontal gutter around the vagina and also the uterus, especially under the action of the cup pessary with an external base, caused by their continued pressure; in many instances, they become imbedded in the tissues so as to make it both painful, difficult, and in some cases, dangerous to remove them. I have been young, and now am old, and I can testify, that pessaries have played a terrible part in producing the most obstinate forms of intro-pelvic irritation and inflammation. Indeed, a man desirous to treat such conditions, has only to seek a region where the physicians make a free use of pessaries.

The *modus operandi* of these effects is simply this: In proportion as the pessary really does support the uterus is something as the sweep supports himself, by pressing back, knees and elbows against the chimney—not only it has to support that organ, but has to compel the uterus to support the abdominal viscera (and the whole upper trunk in a measure). Thus, between the action of the fixed and upward pressure of the pessary on the one hand, and the pressure by the superincumbent parts above and downward, ulcerative action is almost necessarily induced ; and not only so, but by holding the uterus up under such a down pressure, ante and retroflexions are established.

Again, and lastly, the *very best* pessary can only act by *catching* and *holding* a sinking body, and do nothing towards removing the producing cause, viz: the effect of superincumbent weight. Were they harmless, they operate only on the ultimate or effect, and never on the cause, and consequently without prospective success.

Another class of men, seeing the distending and weakening effect of pessaries on the vagina and perinæum, attempt to remedy this by using smaller pessaries with an external base, obtaining a fixed point by belts and straps around the pelvis ; but, whilst they do obviate the distending and weakening effect on the vagina and perinæum, they produce far more cutting and ulcerative effects upon the uterus by forcing that organ against superincumbent weight, for they exert no rebalancing of the body, and no elevation of the upper trunk from the uterus. This last class (the cup pessary) has earned a very bad eminence for inducing uterine versions, flexions, also gutters in the uterus.

But, when we turn to the true idea, muscular laxity and a consequent false trunkal bearing and settled condition of the abdominal organs which act in the axis of the *inferior* in lieu of the superior strait of the pelvis, the

rational mind sees at once that the first, foremost and paramount indication, is, to remove all the abnormal superior weight from the uterus, by pushing forward the dorso-lumbar curve, drawing back the chest, and thereby causing the pubis to dip and retreat, so as to not only lift weight from the uterus, but also to shelter it from weight by the compound mechanical combinations of the body, as in Fig. 1. This done effectively, uterine ligaments, vagina and perinæum are left to contend only with the two ounces of weight in the uterus. This is pleasurably accomplished by the abdominal and spinal shoulder-brace. See Fig. 3 and its previous description.

RESULT.

I have now been engaged many years in the constant application of this instrument, (in many thousands of cases) of simple prolapsus, and find that in *nearly all* the cases where the uterus is not very low upon the perinæum, (consequently *below* the benefitting action) the results have not only been immediate comfort, but steadily improving strength and spirits, and an ultimate recovery; and why? Simply because the normal trunkal bearings were restored, superincumbent weight removed from all the intro-pelvic tissues, and the perinæum, vagina, vulva and uterine appendages were rested and enabled by their returning contractibility of texture to triumphantly buoy up the simple two ounces of uterus in situ.

After this, if the constitutional condition requires constitutional remedies, give them; but in no case waste any time in that way until you have thus attended to the upward compaction of the settling organs and upper trunk.

But, in very great depression of the uterus within the pelvis and especially in cases where the uterus extrudes, then the above instrument about invariably aggravates the effects of the prolapsus, by crowding and holding it still lower; or, to say the least, it can merely give great rest to the spine and lower abdomen without specially improving the uterine condition.

THE UTERINE ELEVATOR.

But, in all such cases, aggravated ever so much by the Brace, the instant we give the slightest vertical support with the hand, the sense of support is complete; for only a slight elevation of the uterus raises it within the upward action of the brace, and every tissue finds rest, and commences to expend its remaining resources in returning to their normal state of tonic contraction and not in exhausting and hopeless efforts to resist their merciless burdens.

To meet this indication, I have constructed the uterine elevator. See Fig. 4.

This instrument consists, first, in a small, celluloid or rubber ring, (only

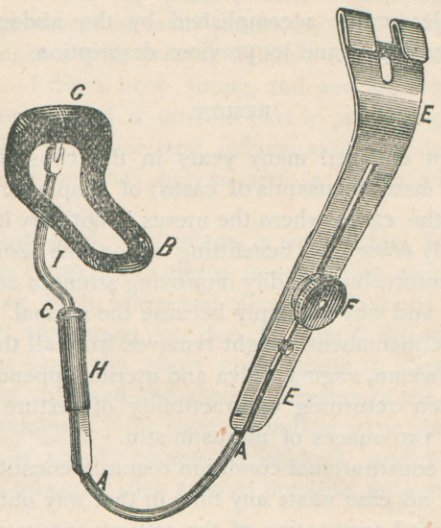

FIGURE V.

RETROVERSION BALANCE.—*A A*, curved shaft cccupying the vagina vertically, and curved so as to correspond to both the inferior and superior pelvic straits, and not to infringe upon the uterus or rectum.

F, thumb-screw for fastening the outer shaft at any desirable point on the steel pendant supporting the shaft.

G, celluloid or rubber ring, mounted on a gold spiral wire in the shaft, for giving an undulating motion to the ring, under jolting motions of the body.

B, heel of ring extending high behind, supporting the posterior *cul-de-sac* thereby drawing back the *os* and pushing forward the fundus.

C, Set screw for regulating the height of the ring or balance, and for turning the balance to meet any degree of lateral mal-position.

E E, the slotted pendant attached to the front part of the brace, and supporting the balance.

large enough to loosely receive the uterine cervix) which, by means of a hinge, is mounted on a shaft containing a gold spiral coil, which gives a yielding undulation to the ring, under all the movements of the body, such as walking, coughing, sneezing, etc. This is also mounted on a shaft, so curved as to fit the vaginal curve, around the *symphysis pubis* externally, and ascend towards the front bar of the brace, to which it is attached by the medium of a slotted steel pendant, and its position fixed by a thumb-screw. When introduced and attached to the brace, the brace having lifted nearly all weight from the uterus, the elevator has to exert but about two ounces of yielding support to the uterus, which meets now with no opposing visceral obstruction to its easy elevation.

Thus we see, that by this gentle and unirritating means, the vagina is elongated and diametrically contracted, and the perinæum and vulva are at rest from their exhausting burdens; and all this without one contraband action against physiological law.

CONTRA-DISTINGUISHING FEATURES OF THE ELEVATOR AND PESSARIES.

They are many and clearly defined:

1st. Pessaries have to be large enough to hold themselves in position under weight; but the elevator is too small to support its own weight, or even to remain in the body.

2d. Pessaries have no external base, and rest on other weak parts for a point; whilst the elevator and all my other intro-pelvic supports, have an external brace and place no stress on any tissue, but rather rest them.

Pessaries can do nothing but support; but these intro-pelvics have but two ounces to support, all other superincumbent weight having been removed by the elevating and uprising action of the external brace.

Owing to the great sameness of the many hundreds of cases, illustrating the working of the brace and elevator, I omit the citation of any.

OF RETROVERSION.

The physical facts are simply these: our examination usually shows the uterus not only to have subsided, often to the perinæum, but also to be occupying a horizontal position with the fundus resting with more or less force upon the rectum and hemorrhoidal veins, the *os* looking correspondingly forward and upward, behind the pubis. In this case, very commonly the fundus will be found so enlarged from venous congestion, as to lead the practitioner to diagnose an induration, and often a fibroid tumor; and I am sorry to know of several experts who have committed this blunder, and have governed their course accordingly for years, of course with no good result. In this case, such a misdiagnosis is fatal to both the patient's

hopes and pocket. As to the position of the organ, perhaps a bell-pear lying in a basin of water will about accurately describe the uterine situation in retroversion.

In this condition, obviously, both the round and broad ligaments must be elongated and tensed, comparatively, and their points of insertion subjected to a more or less dragging or tracting force, and the bladder must also be more or less dragged downward and backward, and sometimes so much so as to cause difficult urination from the flexion thereby caused in the urethra. All these things, taken together, furnish the clearest explanation of the frequent sense of tormina and pressure in the sacrum ; the desire to evacuate the bowels, and the sense of physical obstruction in attempting to do so; also, the annoying, dragging sensations at the insertion points of the round and broad ligaments, and the more or less perpetual desire to urinate, with an unsatisfied feeling on making the attempt.

INDICATIONS.

Of course, two things are indicated, namely: 1st, to restore the proper axis or vertical position to the uterus ; and next, to elevate it to the superior strait of the pelvis But, the accomplishment of these indications with any considerable facility to any comfortable degree, has, so far as I can learn, signally fallen short of the object, so little benefit having been derived from the means used, as often to leave physician and patient in grave doubt as to whether the end gained has justified the means. To restore the uterus to situ in the recumbent position is usually an easy thing, but, to *retain it* there in the vertical position is quite a different thing.

The exigencies of the case have compelled the use of a variety of means with nearly an identical result. The globe pessary has elevated the organ some, but done *nothing* towards restoring its normal axis, (the most important thing) and, in the meantime, it has done much towards instituting uterine flexion by its pressure on the *os*, whilst superior weight was resting on the fundus. Indeed, the end is always worse than the beginning.

Next, the elastic rubber ring has been used ; but in order to prevent its tilting on its axis, under weight of the viscera and uterus, particularly in defecation, it has to be so large as to distend the vagina inordinately, and often, to injuriously infringe on the bladder and rectum and to work very serious mischief, by irritation, ulceration, absorption and inflammation. But the more frequent and very serious evil is, that it *slips* under the uterine weight so as to hit the fundus behind it, and thus cause the ring to rest on the uterus midway between the *os* and the fundus and thereby to produce *flexion* by the uterus breaking its back over it, also causing sickening pains in the organ, together with congestion of the fundus by an obstruction of the visceral circulation by the same pressure.

But, perhaps the horse-shoe pessary, of Dr. Hodge, curved so as to pass up *behind* the uterus, has, in skilful hands, been the most useful; but it, too, has weakened the vagina by reason of the extent of its circumference, irritated the rectum by pressure upon it, and usually failed to be reliable, because of its liability to turn under visceral and uterine weight, unless it was so large as to produce exciting and ulcerative pressure on the vagina and rectum. Often have I found these results, on their removal. Indeed, such *must* be the action of *all* pessaries which have only an internal base, for they *must* ever lack a *fulcrum* or fixed point.

Appreciating this dilemma, the distinguished Dr. Simpson of Edinburgh, introduced the stem pessary. This instrument, by occupying the uterine cavity and using the cirvex as a fulcrum, compelled the uterus to take its position; but, as might be expected, from so unnatural a process, (with few exceptions,) most undesirable and, sometimes, unmanageable results have attended, such as uterine irritation, inflammation, flooding and too frequent menstruation. Besides all this, it never could become reasonably self-manageable by the patient herself; consequently, in America, this nearest approach to the desideratum has passed almost into disuse. In this forlorn state of things, physicians gloomily compare notes, and then, with a shrug stare each other in the face.

Having myself, for many years, been compelled to succumb to the general professional incompetence in the premises, and goaded on by a humane humiliation under the great necessity in the case, I have, after inexpressible trouble and discouragements, succeeded in perfecting a device which I denominate the

UTERINE RETROVERSION BALANCE,

which, attached to the abdominal and spinal shoulder-brace for an external base has, thus far, perfectly met the requisitions in all cases.

What is particularly to be noticed, is, the trifling degree of support or upward force to be used upon the *cul-de-sac* in consequence of the centripetal working of the abdominal and spinal brace, by which the balance has to contend only with about two ounces of floating uterus, whereas, but for this, the balance must contend with an indefinite amount of opposing weight from above, and from the weight of female apparel, which must be correspondingly enhanced by the liability to ulcerative pressure upon the susceptible intro-pelvic tissues.

Another important feature is, that *contact with a congested or ulcerated uterus or vagina* which may be undergoing local treatment, is completely obviated.

In all the hundreds of cases in which I have applied this arrangement, (all things equal) the most bedridden patient has immediately *commenced*

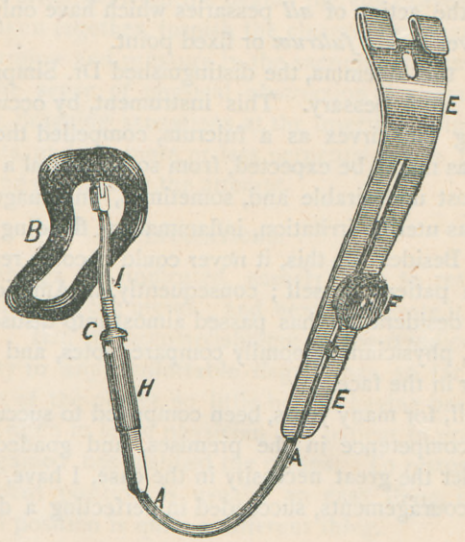

FIGURE VI.

ANTEVERSION BALANCE.--*A A*, Shaft curved so as to just fit the vagina, and the arch of the pubis, when it leaves the vagina and passes up in front, to be attached to the brace.

H, hollow, jumping or undulating cylinder, to which a free and yielding undulation is given by means of a golden spiral coil within it.

I, curved shank or goose-neck entering the cylinder *B* by a screw shaft, which allows of any desired elevation or depression.

C, set-screw fixing the goose-neck at any degree of circular position in the vagina.

B, oblong ring mounted on the goose-neck and curved to be attached to front bar of the brace.

E E, vertical slotted pendant receiving the shaft *A*, at one end so as to carry the vagina high up between the bladder and uterus.

F, thumb-screw to hold balance to pendant.

exercises and enjoyments, and all the varied sympathetic concomitants have begun to subside.

Another important desideratum is supplied by this balance, viz : it will be noticed that the ring can be turned in a circle to the right or left, so as to meet any degree or variety of obliquity or laterality, by simply turning its goose-neck in the shaft where it enters it and is fastened by a set screw. This meets a crying want which has caused much trouble and yet has never been fully met.

CURATIVE ACTION OF THE BALANCE IN UTERINE CONGESTION AND ULCERATION.

And here I must not omit to notice a most important and overriding fact in the repositing of the uterus by this combination ; one indeed, which bids fair to mark an era in the management of uterine congestion and ulceration, namely : I have found invariably, that when congestion and ulceration are complicated with prolapsus or versions, when the latter are fully and quietly removed by the above plan, the former have ever very soon commenced to improve, and, as a rule, to ultimately disappear. This fact, at first took me by surprise, but the frequency of its occurrence soon led me to see that it was in accord with our fundamental proposition, that, "the viscera are as much under the law of an ordained primary position and bearing as the bones, and that derangements requiring mechanical aid will follow any change, in this respect as well as in the other." In this case, the mal-position has disturbed the vital status, and acted as an excitant or an irritant, which no medicine or local treatment can ever fully meet, until the primary law of position and bearing is restored to rule.

So it is in luxations,—swelling, inflammation, pain, fever, tetanus, etc., ensue, threatening life, but all these instantly subside on reducing the luxations ; and just so is it with uterine displacements, and now after many years of extensive experience I have not felt called upon to treat locally one tythe of the cases I formerly did ; and what makes this idea very significant is this fact, that in several severe and protracted cases where the most eminent men had spent years (at intervals) in treating, by various substances, to get the uterus in a fit condition for reposition, I have induced a rapid cure by at once repositing, irrespective of soreness or ulceration. I here add my solemn protest and charge against wasting the time, strength and money of the patient by treating persistently the mere ultimates of the malady, and leaving the mal-position (the real provocative) unattended to.

As to cases, out of great heaps of them I select but two or three as representatives, and refer to my "Pathology and Therapeutics" for reports of others, from prominent practitioners.

Case 1.—Mrs. McK., age, 32 ; no children ; was the subject of complete and inveterate retroversion, for many years, accompanied by a remarkably atonic condition of the vulva and vagina, there seeming to be no remains of contractility in them. The bladder was so drawn backward and down as to cause a constant propension to urinate, and the rectum was so compressed as to impede defecation and induce a constant sensation in the sacrum, of "boring," "aching," "weight, and the feeling of a flatiron resting in the hips," which was aggravated on standing and walking. All these were attended with that mental depression, pain and sense of weight and pressure in the top of the head, which are so usual in such cases.

To reposit the uterus, or to attempt retaining it by any of the various pessaries, was of no use, except when the instrument was so large as to strangulate the intro-pelvic, sanguinous and fœcal circulations. In this state, she was sent to the care of the most distinguished uterine manipulator of this country, Dr. Hodge of Philadelphia, where she enjoyed for months the assiduous care of that gentleman, several times a day, but gained nothing but the benefits of rest and sympathy. In this case, the horse-shoe and double lever pessary of Dr. Hodge had the fairest chance in the Doctor's own fingers, for months, and failed; the inconveniences of its use proving to be paramount to its advantages. When not so large as to strangulate, it would invariably tilt back under uterine and abdominal weight.

At this forlorn stage of the case I was placed in charge, with orders "never to give up." The abdominal and spinal brace gave much comfort by supporting the spine and abdomen, but rather aggravated the retroversion, the abdominal support acting so much above the retroverted uterus; nor could I possibly make any of the various pessaries comfortably retain the uterus in axio. In a fit of vexation at the idea that the combined professional ability of the old and new world could not balance two ounces of uterus, I examined the lady in a vertical position to see what could be the matter. In doing this I was surprised to notice that such was the expansion of the flabby vagina as to allow my two forefingers to pass between the uterus and rectum, entirely above the uterine fundus, so much so, as to draw the *os* against my finger at its junction with my palm. I also noticed that as the finger carried up the posterior *cul-de-sac;* the superior vagina was thereby so tensed as to forcibly pull back the *os* and consequently to poise the fundus over it. With the external brace on, this required no force, causing the woman to rise on her toes and fall heavily on her heels with a "*chug,*" whilst my fingers supported the posterior *cul-de-sac.* I noticed no disposition of the uterus to settle or retrovert; I also noticed that whilst doing this, the shortened and expanded vagina became materially elongated and correspondingly contracted diametrically, (two cardinal requisites, of which every pessary must be contraband.)

"There," exclaimed the lady, "hold me so all the while and I'll be in heaven."

This irradiated the darkness, and showed that after having first corrected the trunkal bearings, we were left to contend only with the weight of the uterus, and should never make the uterus a point, but merely support and carry up the *cul-de-sac*, and the work is done; for this drags back the *os*, and that *compels the fundus* to *advance* and be poised over the *os*. Thus then, this long, rough and tortuous road was smoothed, shortened and made easy; and furthermore, I learned that had Dr. Hodge effectively corrected the trunkal bearings, and then have reduced his large pessary to one-third its usual size, and supported it by an external base, he would long ago have seen the travail of his benevolent soul, and thus by his genius and the prestige of his great name, had this fight with uterine retroversion brought to an end.

For this lady, I at length developed the Retroversion Balance, and completely met the case; and I must add, that my efforts in this case, one of so many distinguished failures, proved to be the fulcrum of the great desideratum in uterine obliquities.

Case 2.—Mrs. ———, a young married lady in good general health, was the subject of severe retroversion. Prof. Stephen R. Smith of Bellevue Hospital College, describes it to me thus. He says:—"Uterus greatly elongated and enlarged and so tender as not to admit of being touched; the tenderness extends throughout the vagina and vulva; so much so, that to introduce the finger gives the most unbearable pain. The *os* is high up and behind the pubis, and the fundus presses so violently upon the rectum as to cause the merest fluid dejections to give excruciating suffering. The uterus is also fixated immovably; scarifications, leeches and other means have failed to ameliorate, and with the constant use of heavy doses of morphine, the patient's moans disturb the boarders throughout a four story house; in this dilemma, I consulted Dr. ———, (the most distinguished member of the faculty of Bellevue College) who, in a careful examination, advised recumbency, together with leeches, scarifications, glycerine and other depletants, for about six months; 'after which, you will,' said he, 'be able to reposit the organ.' Thinking this to be cold comfort, I took your article on Uterine Displacements, (which from the first had impressed me very much), and immediately determined to give you the case, if you would take it."

Next day, we jointly visited the woman, and a more pitiably distressed object I never met. I placed her in the knee and face position and directed Dr. S. to powerfully draw the abdominal organs upward, whilst with my thumb in the rectum I got under and behind the uterine fundus, and by violent pushing, dislodged the uterus from its bed and restored it to situ. I

then applied the Abdominal and Spinal Shoulder-brace and introduced the Balance which, without force, held the organ in situ. In an hour, the woman said she was "in heaven." In a week, she returned well to Boston, and has so remained, now ten years since. This case will be found, as reported by Prof. Smith in the "Philadelphia Medical and Surgical Reporter;" also in my "Mechanical Pathology and Therapeutics."

Case 3.—Mrs. Judge B. of Patterson, N. J., age 35; general health and physique good; was very desirous for offspring and had for one or two years been steadily under local treatment for enlargement, congestion and ulceration of the *os*. She stated that cauterizations effected temporary improvements, which were always followed by relapses. Digital examination showed decided retroversion, with enlargement of the whole organ. The *os* was swollen and tumid, and of a purplish or livid color, and covered with a tenacious layer of mucous. I corrected the trunkal bearings by the external brace, and reposited the uterus with the Retroversion Balance, and declined to treat the diseased condition of the uterus, predicting that the latter would subside in due time just as swelling and pain subside when a luxation has been reduced.

On the fourth day, the uterus was found perfectly in situ, its size greatly reduced, and the swollen and purple appearance of the *os* was displaced by a nearly natural size and a natural pinkish color, with no mucous coating over it. On asking the judge to look through the speculum, (for he was familiar with its use), he remarked:—"Well done, Doctor, that shows the difference between fine and coarse practice. Any one can persevere in burning a uterus for months, but it takes you to cure one without."

In two weeks she became *enciente*, and she has (now some several years since,) been a healthy and happy woman. How long would it have taken to establish this result by a simple system of cauterizations?

Thus we see the curative effect of simply reducing the uterine luxation.

OF ANTEVERSION OF THE UTERUS.

Of this uterine displacement, so near akin to retroversion, there is a numerous class, than which, uterine retroversion has ever proved more intractable. A digito-vaginal examination usually shows the following conditions, viz:—The vulva is found full and flabby; the labia disposed to be separated, and there frequently will be felt a small tumor pressing with more or less force in front, crowding upon and pushing the urethra before it. Quite frequently, this tumor is completely extruded, or rests in the meatus; but, on assuming the recumbent positions it pretty uniformly recedes. On carrying the finger back, the *os* is found quite posterior to its normal central

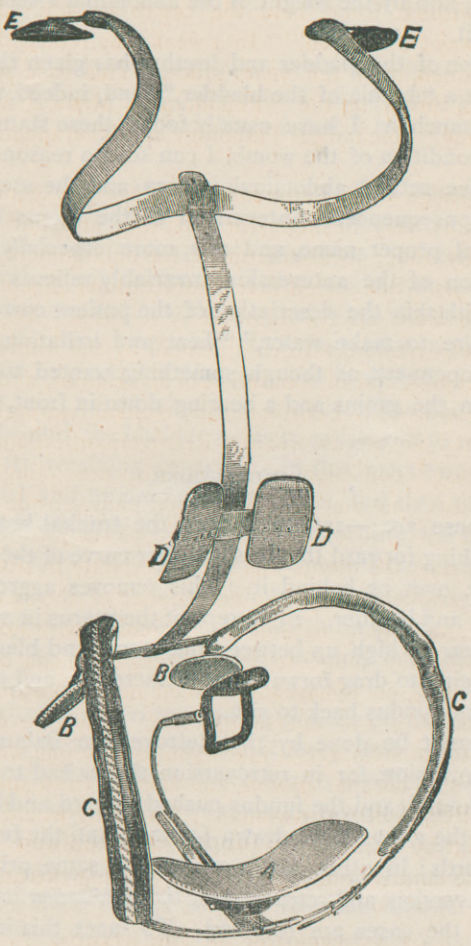

FIGURE VII.

THE ABDOMINAL AND SPINAL SHOULDER-BRACE AND THE RETROVERSION BALANCE COMBINED FOR BOTH VERSION AND FLEXION.—Simultaneously poising the superior trunk behind the dorso-lumbar spine; expanding the chest; bracing the weak spine; restoring the normal obliquity of the pelvis and elevating all the abdominal viscera from the bladder, rectum and uterus. (See Explanation of Fig. 3.)

Also, the balance attached to the brace, just curved to the vagina, its apex ascending high behind the uterus and supporting the posterior *cul-de-sac*, and its free end loosening the uterine cirvex, thereby simultaneously drawing back and down the *os*, and crowding up and forward the fundus to axio, without making the uterus a point, or infringing upon any diseased point, or interfering with the progress of any local treatment, when in position, the ring or balance also turning on its axis so as to meet any degree of laterality in the mal-position.

The Balance, in nearly all respects, differs from a pessary.

position in the pelvis and the fundus either resting upon the bladder or fallen against it, and by the weight of the abdominal viscera, is crowding the bladder before it.

This protrusion of the bladder and urethra has given rise to the idea that this condition is a "hernia of the bladder," (and, indeed, sometimes may be such,) but, inasmuch as I have usually found these states accompanied by an anteverted condition of the womb, I can see no reason for so naming it; for, evidently, the settled abdominal viscera and the uterus, are the power and not the consequence. Anteversion of the uterus then, it appears to me, is the usual proper name, and this, more especially, as I find that a proper correction of the anteversion, invariably relieves the whole train of symptoms. With this, the description of the patient corresponds, to wit:—"Constant desire to make water," "heat and irritation about the parts," "a feeling of openness, as though something wanted to be born," "dragging feelings in the groins and a bearing down in front, with misery in the back."

INDICATIONS.

Obviously, these are:—1st, to correct the trunkal bearings by elevating the viscera, pushing forward the dorso-lumbar curve of the spine, and poising the upper trunk over or behind it. This removes aggressive weight away from the uterus and bladder. 2d, to reposit the uterus in axio by carrying the anterior *cul-de-sac* so high up between the uterus and bladder, as to compel the superior vagina to drag forward the retracted *os*, and of consequence, to throw the uterine fundus back to situ.

But, this cannot be done by the Retroversion Balance, which acts so happily in retroversion, for in retroversion the *os* had to be dragged downward and backward, and the fundus pushed upward and forward; whereas, in anteversion the *os* has to be drawn forward, and the fundus elevated and thrown backwards; in other words, whilst the same principal is to be employed in anteversion and retroversion, the *application* has to be exactly reversed, just as the cases are reversed. To meet this indication, I simply shorten the vaginal end of the shaft (because the anterior vagina is shorter than the posterior) and turn the supporting heel of the ring from backward to forward, so that it elevates between the bladder and uterus in lieu of between rectum and uterus. See Fig. vi.

By the retro and anteversion balance, the oblong ring performs two offices besides the simple elevating one, viz:—The higher it is carried up in the vagina the more it compels the *os* to be dragged backward or forward, (as the indication may be), and thus forces the fundus correspondingly forward or backward, *without making the uterus a point*; thus the uterus turns upon its axis, and it is balanced without the possibility of ulcerative pressure; this

latter immunity being the result of the yielding action of the spiral coil in the cylinder on the one hand, and the full removal of superincumbent pressure on the uterus.

I have for many years been applying these principles in hundreds of cases of retroversion, anteversion, and lateral obliquities, with almost universal success, after all other methods have failed.

Case 1.—Mrs. ———, been married two years; had been confined to bed about same period with attack of syncope on every attempt at rising; complained of terrible sense of faintness, or "goneness" at the stomach; feet constantly cold, and nearly useless. There was a constant biting and imperious desire to urinate, and complained that, when she did, she "couldn't make out anything." Her very able physicians after trying every cobbling arrangement by pessaries, had given up in despair.

When I saw her, the anteversion was complete, and the uterine fundus had settled down behind the bladder so as to press and to retrovert it partially and destroy its retaining capacity. In this most forlorn hope, I applied the Abdominal and Spinal Shoulder Brace, and then the Anteversion Balance, which acted instantly to a charm in repositing the uterus, both as to its axis and its height. Her physician examined the case and was wild with delight at finding it just as it should be, and especially, to see the *os* dragged well forward, as well as the fundus thrown back. Patient spoke particularly of a feeling of calm and quiet coming over her, with greater freedom of breathing.

This lady I immediately raised to a sitting posture on the edge of the bed, notwithstanding she protested it would kill her; after rubbing her limbs awhile, with arm around her waist I raised her to her feet, and after a short time, walked with her around the room—with none of the old syncope or unbearable uterine or urinary sufferings. On the next day she rode seven miles into town to be under my care; and within four weeks she returned to her home to take personal charge of her domestic affairs. In truth, so wonderful was this change, as to be the excitement for a radius of many miles. In meantime, nothing else whatever was done.

The lesson we learn in this and other cases, is, that not only will this combination meet all the requisitions in anteversions, but, that a vast number of serious and frightfully nervous and sympathetic concomitants immediately commence to find their quietus.

Case 2.—Mrs. H. Cleveland, age 35, says:—"At the age of 11, I fell on my sitting place, and felt something give way, and from that hour to this, I have not known one hours' rest from a biting desire to urinate."

An examination showed a positive anteversion, with the uterus pressing so

against the bladder as to diminish its size, and also to frict upon it in all her movements.

To this extreme case I of course applied the abdominal spinal shoulder-brace and the anteversion balance combined. In a little time she remarked: "Doctor, this is the first half hour I've spent free from severe distress, for twenty-five years." Owing to the great irritability of this case, it required some days to overcome all the uneasiness connected with the presence of the Balance near such very sore parts; but soon it adjusted itself, and she has ever since, (four years) been a comfortable woman; and I now feel called upon to say to the profession, that the desideratum is now supplied for those forlorn cases in which, heretofore, we have not enhanced our professional prestige, and certainly have not met the crying demands of a very numerous class of sufferers.

And now, in taking leave of this subject, I beg to remind the profession again, that not only will the foregoing principles, well applied, fill the requisitions, but remove or ameliorate concomitant indurations, congestions and ulcerations on the simple principle of having placed a quietus on their provocatives; and also, to urge the early reposition of the organ, irrespective of any diseased condition of the tissues, for I have found, that in many cases, the very tenderness which seems to forbid the presence of the Balance, will soon commence to subside under its presence; nor need this seem strange, since the pain, swelling, fever and delirium subside on reducing the luxation, and since other diseased conditions improve on being placed in a state of passivity.

N. B.—This pamphlet is presented by the BANNING CELLULOID SUPPORTER CO., of 96 Tremont Street, Boston, Mass., who, under Dr. Banning's personal supervision, manufacture all of his various appliances. Dr. Banning will be happy to see any member of the Profession, or correspond relative to cases.