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AND THE

GENU-PECTORAL POSTURE

IN THE

REDUCTION

OF

UTERINE LUXATIONS.

BY

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PNEUMATIC PRESSURE AND THE GENU-PECTORAL POSTURE
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A REPLY TO DR. DOUGHTY'S "INTERROGATORY."¹

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(With five woodcuts.)

IN the October number of the AMERICAN JOURNAL OF OBSTETRICS an article appeared, which was chiefly occupied in reviewing the opinions of Prof. Henry F. Campbell on this subject; and which at the same time failed to present fairly his teachings, either as to the action of forces, or the applications of the method in practice.

As a wrong impression may have been inadvertently conveyed to the readers of the JOURNAL—by means of detached and fragmentary quotations, and by giving undue prominence to the expression of some of his opinions, while other qualifying clauses, no less important, were forgotten or disregarded—being familiar with the views of Prof. Campbell, and knowing by my own experience the great value of this method of treatment, I shall in the following discussion briefly refer to his already published paper,² and consider also the validity of Dr. Doughty's adverse arguments.

In "the interrogatory" contained in the very title of this review there is a manifest error in the use of terms. Referring to the action of atmospheric pressure, the question is asked: "Is it the real factor, or simply an auxiliary?" No such language as this is known to mathematics or mechanics; every quantity, every force, power, condition, if you will, which assists in producing a given result, is a factor—a real factor, whether its numerical value be estimated at one or a million,

¹ See article (October No., p. 561) by Wm. H. Doughty, M.D., Augusta, Ga.

² *Résumé of a Report on Position, Pneumatic Pressure, and Mechanical Appliance in Uterine Displacements.* By Henry Fraser Campbell, M.D., Augusta, Ga. 1875.

unity or infinity; and where several forces conjointly act to produce their common result, there is no one that can alone be called *the* real factor.

The writer has given us what seems intended as a philosophical disquisition upon the process, speaks of factors, and employs a diagrammatic representation of forces. Hence, I shall hold him to the sphere of argument selected, and admit no hybrid terms.

We shall see hereafter, by the language of the reviewer himself, whether or not pneumatic pressure is a "real factor."

After reading the review, one might be led to suppose that the author had been the first to call attention to the potent action of gravity, and that Dr. Campbell had not given full credit to its influence. Indeed, by some strange oversight in the opening paragraph, in quoting from the paper of Dr. Campbell, it is declared, "now it [the posture] is subordinated to the mere 'utilization of *air-pressure* as the instrumentality to effect uterine replacement.'" In the publication of Dr. Campbell, when speaking of the neglect into which this method had heretofore fallen, the sentence reads thus: "I am not aware of a single instance in which distinct mention is made of the genu-pectoral posture being applied for its true object, the utilization of *air-pressure* as the instrumentality to effect uterine replacement, by gravity." The quotation in the review stopped short of the two little words, BY GRAVITY, although they were all that remained to complete the period; and gravity was to have so important a place in the discussion which was just being entered upon—was to be brought prominently forward, as par excellence *the* "potent factor"!

So important did Dr. Campbell regard the influence of gravity, that in giving a familiar, easy, and approximate illustration of the process by the reversed pneumatic syringe, he represented gravity or the weight, in his diagram (Fig. 1), by a large volume attached to the handle; and to be more explicit, I introduce this and the other cuts from his pamphlet, the subject of the review.

Without comment, I give other quotations from Dr. Campbell, in which gravity is emphatically mentioned in various connections.

In describing accurately the genu-pectoral posture, he gives

the accompanying outlines, indicating that of the true posture and two of the improper variations from it (Fig. 2). The first, he says, "represents the most complete reversal of the bearing of GRAVITY that the human body can practicably be made to effect upon the same plane. The second figure scarcely requires particular description, as the manner in which the reversal of GRAVITY must fail is sufficiently obvious. The last is to indicate an outline of the body which, though entirely different from the other, is still equally unfavorable to the reversal of GRAVITY in a way that would promote uterine replacement by equilibrium of pressure."¹ Again, in regard to rectal inflation,

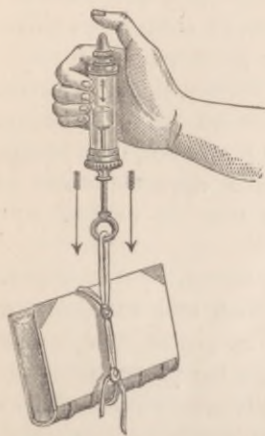


FIG. 1.—Reversed pneumatic pump.

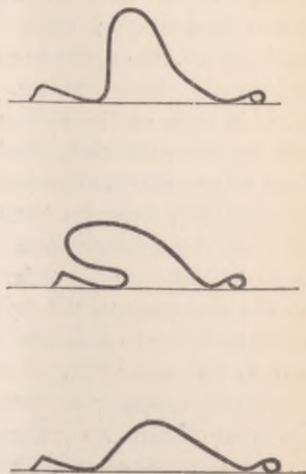


FIG. 2.—Outline of the true posture and variations from it.

he says it may serve in certain cases to "dislodge the fundus from the hollow of the sacrum, thereby making restitution by vaginal inflation and inverted GRAVITY easier and more certain." In referring to the rationale of the process of reduction, he says: "Inverted GRAVITY is undoubtedly the force *principally* acting, but it is kept in the most powerless abeyance, until downward pressure, through the vulva, is supplied, 'to restore the equilibrium,' as the physicists would perhaps express the process."

¹ "She must not pitch forwards and make the pelvian angle obtuse, nor draw the knees up under the body, making it more acute," etc. Sims: Uterine Surgery, pp. 13, 14.

And in speaking of the terms in use, which might lead to errors in the use of the posture, he says: " 'Knee-elbow position,' 'quadrupedal posture,' and especially the term 'all-fours,' are names which fail to describe, accurately, knee-and-breast posture. They do *not* indicate a position of the body in which the GRAVITY¹ of the organs becomes inverted."

So much for gravity.

Although the author of the review has been "long familiar with the knee-chest posture," and though "early taught the requisites for its skilful performance," we might be led to suppose that this familiarity had given but little satisfaction in the past, and that the value of these early lessons had just now begun to be doubted; when on the next page he speaks so disparagingly of its superior advantages, in connection with his mention of the knee-elbow and other postures, which are very good, it is true, as far as they go. Indeed, the many failures which he informs us he has experienced in the attempt to replace retroversions after raising the perineum, may be due to this very fact, that he does not fully appreciate and avail himself of the greater power which may be evoked by the *genu-pectoral* posture.

On the first page of the review it is stated, "*we have so often reduced* this class of displacements, with and without careful regard to the admission of air into the vagina," etc.; and, on the very next page, "*we have so often* in retroversions raised the perineum with two fingers, with a free admission of air into the vagina, *without witnessing this magical replacement,*"² etc. Such experience with pneumatic pressure in the *genu-pectoral* posture seems, by these several statements, to have been characterized by very abrupt and rapid oscillations, the barometric index—in this instance of applied aërostatics—changing in degree and kind with as little premonition as the variable mercury on an unsettled day. Furthermore, any one is certainly in error who for a moment supposes that the advocates of this method of treatment regard it as characterized by "universal and uniform success;" if such were the case, it would differ from every other agent, instrumentality, or device known in medicine.

Like nearly the entire article, the third paragraph of the

¹ The capitals are mine.

² The italics are mine.

criticism contains within its own limits all that is needed for its complete refutation. "Reduction often made in this position," it is argued, "with total neglect of this special condition, is proof that it is not indispensable, *unless*¹ it be held that it has been unconsciously used by operators who have failed to recognize its presence and merits."

Now, what is the inference to be drawn from this? It evidently is, that if "it be held" by competent authority, that air-pressure "has been unconsciously used," the frequent reductions thus made are no longer proof that air-pressure is not indispensable; but tend rather to prove that this factor *is* a *sine qua non* in the process. Our authority that air *has* been unwittingly used is conveniently furnished for us in the next sentence, when it is affirmed, "we believe it true . . . that the introduction of more or less air *does* take place—*indeed, could hardly be avoided.*"¹ *Ergo*, the very opposite has been substantiated to that which the writer started out to prove.

Nor from the foregoing does it logically follow that "for that reason the immediate, spontaneous rectification of the uterus ought to have been so *constantly*¹ observed." For such instantaneous and unflinching success is claimed neither for this method nor for any other human device; and "the notable instances now made public," though they may give rise to a proper admiration for this "beautiful" reduction in the mind of every sincere seeker of truth; and place upon a lasting basis the process by which it is accomplished; yet to others who have been "long familiar" with this "very ready method" of reduction, these successes have themselves for some time been no longer "objects of wonder and puzzling contemplation."

Passing over minor points, let us now take up what is evidently considered the climax of the argument—the point at which a cumulative effect has been produced—where the weight of logic, becoming more and more powerful, is just about to descend like an avalanche, carrying all resistance before it. "Observe that it is the posture," says the reviewer, "that has disturbed the equilibrium, the restoration of which demands the admission of air, not as the *factor* in the replacement, but for the one purpose of neutralizing the intra-abdominal pressure, and thereby leave the gravitation of the pelvic viscera to con-

¹ The italics are mine.

tend without restriction with the ordinary resistance to their return." Mark the language used—the admission of air is now demanded in order to restore the equilibrium, and leave the gravitation of the viscera to contend, etc.; and yet this condition, this power, this force, which is so important as to be "demanded," is not a factor in the replacement—that force which it is declared, has a "purpose" to perform; which must itself loosen the shackles of gravity, that it, "the potent factor," may act.

The expression "*the factor*" is constantly used; the elementary principle already alluded to, apparently not being understood, that where an effect is obtained, a result produced, by the consentaneous action of several causes, agencies, or



FIG. 3.—Retroversion in the genu-pectoral posture.

forces, they are each termed *factors*, no matter what the comparative power of each individual factor may be.

"In invoking gravity for the relief of retroversions," continues our author, "in the knee-chest or elbow posture, the entrance of air into the vagina, except in minor degrees of displacement, becomes necessary in order to relieve a necessity created by the posture itself." Alas for the meaning of language! An agency which is so indispensable, so potent, as to be demanded in the chain of events that brings about the end; which "becomes necessary in order to relieve a necessity;" we are requested to "observe"—lest we should logically observe something very different—is not a factor in that result, for the accomplishment of which, it "becomes necessary to relieve a necessity"!

The truth has become so potent as to struggle forth in the emphasis of this awkward tautology; although the reasoner himself fails to see its force, to prove the error of his conclusion. "Created," it is added, "by the posture itself." No matter just now *how* the necessity is created, so far as the importance of the air-pressure is concerned to relieve the necessity. I am not the champion of any one particular factor, denying the potency of any of the others—for air-pressure versus gravity as evoked by the posture, or vice versa. The question is, by what *means* is this so-called necessity relieved, that the process may be completed, and the uterus restored. This the reviewer himself tells us is accomplished by "the admission of air."

"Seeing then its function is limited to this particular duty," continues our critic, "it cannot be considered the real factor." As it confessedly has a "function," a "particular duty," it is declared by implication in these very terms, that it is one of the factors; and (of course) a real factor, if the English language has any meaning.

Further, "it becomes an antecedent to the forcible employment of gravity alone in fortunate cases." If this means anything, it implies that in the varieties of uterine displacements easily reduced, air on its admission *first* exerts its influence; which is then followed by, and renders possible, not only the employment of gravity, but its forcible employment; and that this is sufficient alone to accomplish the reduction. What greater tribute to the potency of pneumatic pressure could its most earnest advocates desire!

"And to gravity supplemented by direct manual or instrumental means in those less so." Have the rules of logic no longer any force? Are premises no longer the guides to conclusions? Shall a force so important that it is dignified with the distinction that it becomes an antecedent—acting first in the order of time—not only to gravity, but to its forcible employment in cases easily reducible, and which in the more difficult, too, acts as an antecedent to gravity assisted by other means; which is demanded to restore the equilibrium; which thus neutralizes the intra-abdominal pressure, leaving the gravitation of the pelvic viscera to contend without restriction, etc., etc.; shall all this, I say, be predicated as the function of a force, to dismiss it in the next breath with the contemptuous,

peculiar, and—in this connection—certainly original expression “it is at most an auxiliary”!

Finally, it is triumphantly stated that “*complete vaginal distention—that balloon-like inflation—becomes only possible, after or simultaneously with (not before) reduction, and is in no wise the cause of the replacement.*” I regret that the reviewer has done his argument so much injustice as to forget that in many well-known processes causes and their effects are often simultaneous. It is not important for my argument at what exact moment of time complete distention is accomplished; nor has this been the topic at issue. As the hackneyed fallacy of *post hoc propter hoc* has been significantly alluded to, I am here reminded with much greater propriety of the fallacy, no less familiar, termed *ignoratio elenchi*. What I am establishing is—and by the reviewer’s own premises—that pneumatic pressure is an important factor in the reduction; whether it begins to exert its power at the moment of time when it is first admitted, or at the moment when distention is completed, or whether it acts continuously in the interval between these limits. The fact is that in cases amenable to this method the process of reduction of the displacement and that of distention of the vagina proceed *pari passu* with each other—the air-pressure is acting all the time—and complete distention and complete reduction are at one and the same time accomplished.¹

Nor does all this at all effect the claims as to the potency of air-pressure *per se* as a factor in the reduction; nor does this infinitesimally short period of time that may intervene between the entrance of air and the complete distention of the vagina make any difference; for the reviewer himself tells us that in favorable cases “the uterus rectifies itself almost instantly upon the admission of air.”

In admitting that “the pneumatic pump affords a very good illustration of the mechanism here given,” a very good illustra-

¹ “Thus we obtain, in this case, a solution of the difficulty which is placed before us. The instantaneous effect or change is simultaneous with the instantaneous force or cause by which it is produced. . . . There is a progressive cause and a progressive effect which go on together and occupy the same finite time; and this simultaneous progression is composed of all the simultaneous instantaneous steps of cause and effect. The aggregate cause is the sum of the progression of causes; the final effect is the last term of the progression of effects.”—Whewell: *History of Scientific Ideas*.

tion is also afforded us of the fallacy of the argument above quoted. For to offer as an argument that this alien, "complete vaginal distention" . . . "becomes only possible after or simultaneously with, not before, reduction, and is in no wise the cause of the replacement," in order to prove that the air-pressure *per se* is not a powerful factor, is as illogical and meaningless



FIG. 4.—Reduction by pneumatic pressure and the genu-pectoral posture.

as to say that the atmospheric pressure does not act as a factor—an important factor, the determining factor—in causing the descent of the piston of the reversed pneumatic pump (Fig. 1), *because* the barrel of the pump above it does not become *completely* filled with air *until after* or at the instant that the piston has descended! The statement, though absurd, would be exactly parallel and of equal force.

I have thus briefly shown that a force—which is "demanded" in a process; which has "a purpose" to accomplish; which "neutralizes" an opposing force; which "becomes necessary to

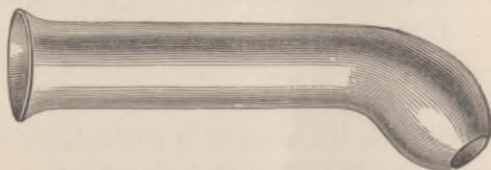


FIG. 5.—Campbell's pneumatic repositor.

relieve a necessity"; which has a "function," a "particular duty" to perform; which "becomes an antecedent" to the forcible action of "the potent factor"; which "equilibrates" other contending forces; upon whose action, in appropriate cases, the

result is "almost instantly" accomplished—through whatever medium or instrumentality it is supplied, can be—by the simple significance of language and at the tribunal of common sense—no other than a most important and indispensable factor.

Consequently, "these views" of the interrogator, if he thereby means his conclusions, cannot be maintained as logical sequences to his own premises; and the glass air-way—the simple device for self-treatment, under certain conditions, through which this factor may be conveniently employed—is in every "proper sense," and to all intents and purposes, a uterine repositer.

As to the question of self-replacement, it is scarcely necessary to state that its *objects*¹ have apparently been misunderstood by the writer of the adverse review. As to the validity of its *claims* as a method to be employed under the circumstances for which it is recommended, *this follows as a direct and necessary corollary upon the already well-established claims of pneumatic pressure and the genu-pectoral posture.*

In his valuable and comprehensive "Report" on the Progress of Gynecology during the year 1875," Dr. Paul F. Mundé gives as one of the four advances "the growing appreciation of the influence of posture on the health of the female sex, and the recognition of the value of posture, especially if aided by pneumatic pressure, in the treatment of uterine displacements." In his paper on the "Reposition of Retro-displacement of the Gravid Uterus by Posture and Atmospheric Pressure," Dr. Mundé says, "these doubts as to the power of air-pressure in the vagina certainly confirm the impression I had gathered touching the ignorance or want of appreciation of the profession of this simple, but nevertheless powerful instrumentality;" and again, "I do not hesitate to express my unqualified support of the principles of treatment advocated by Dr. Campbell; and my belief that its universal appreciation and adoption will be of great benefit to the suffering female sex."²

In the discussion of Dr. Campbell's paper, presented to the

¹ See Abstract of Proceedings of American Gynecological Society, Am. Jour. Obstetrics, Oct., 1876, pp. 584-5; and for Prof. H. F. Campbell's views at length on this subject, see Volume of the Society's Transactions at the First Annual Meeting in New York, in September, 1876.

² Am. Jour. Obstetrics, April, 1876, p. 173.

³ Am. Jour. Obstetrics, June, 1876, pp. 297, 300.

American Gynecological Society at its late meeting in September, "Dr. Emmet spoke favorably of the method, and regarded the glass tube as an important acquisition in carrying it out."¹

The endorsement of pneumatic pressure and the genu-pectoral posture, in their varied applications, by other prominent writers and practitioners² in America, England, and Germany, renders it scarcely necessary, in a brief paper like the present, to notice in detail the several petty exceptions taken in the review. Though my special object was to consider the open question propounded, I hastily add the following concluding rejoinders:—

1. That even after the most skilful reduction and the adjustment of a proper support, self-replacement is often by no means "a superfluity;" for the uterus will frequently settle down upon or in spite of the pessary, or return in some degree to its former obliquity. Self-replacement in many instances will correct this condition, supplementing the action of the instrument and enabling it to be borne.

2. That though the patulous condition of the vaginal strait will in some cases cause the entrance of air on the assumption of the posture alone, this does not impair the principle upon which the use of the pneumatic reposer is based; and in many cases of a different conformation, it will prove a valuable convenience to insure a free and certain ingress of air.

3. That while the advocates of this method would by no means banish other valuable positions and methods of replacement, the genu-pectoral posture when employed in diagnosis does not "deny" such "useful knowledge" as the degree of contractility of the vagina and its relations with the uterus. On the contrary, it sometimes has this advantage: the examining finger introduced and excluding the air, until the os, vaginal walls, and cul-de-sac have been sufficiently explored, may then

¹ Am. Jour. Obst., Oct., 1876, p. 684.

² See Abstract of Proceedings British Med. Association: Influence of Posture in the Treatment of Uterine Disorders, by Arthur W. Edis, M.D., Obst. Jour. Gr. B. & I., Oct., 1876, p. 463. Dr. Solger, Berlin: *Beiträge zur Geburtshilfe und Gynäkologie*, Vol. IV., No. 1, quoted by Dr. Mundé (loc. cit.). See views of Dr. Robert Battey, Atlanta Med. & Surg. Journal, June, 1875, pp. 135-6; *ibid.*, July, 1875, p. 231; Dr. T. S. Hopkins, *ibid.*, Nov., 1875, pp. 449-452. Transactions Medical Association of Georgia, Dr. W. O'Daniel's Report, p. 61. Dr. James D. Trask, Medical Record, May 6, 1876; and Obst. Jour. Gr. Br. and Ir., May, 1876, Am. Sup., p. 22.

elevate the perineum, following the receding uterus after the admission of air, and thus derive additional knowledge as to "the extent and direction of motion possible to the dislocated organ."

4. That in "*fitting*" the pessary, after such information has been obtained, it is not to be supposed that the intelligent gynecologist will be led astray merely by the subsequent distention of the vagina; for he already knows that no matter how great the expansibility may be, it is especially desirable, in all cases, that the lateral walls should be distended as little as possible by the support; so that it may enable the vagina to regain, and not still further decrease, its already diminished tonicity.

5. That it has well been added, in regard to the *introduction* of pessaries, that "after the reduction of the displacement" they may be as painlessly introduced on the back. But in no other than one of the knee postures (and best, of course, the knee-*breast*), can the previous *reduction* be made so easily, fully, and painlessly. Bimanual palpation is undoubtedly to be made, when necessary, in its appropriate position; and before the introduction of the support. Complete reduction may then be made in the knee-*breast* posture, a change to which is the part of wisdom, not "folly," if a more perfect restoration of the uterus and superincumbent viscera to their normal relations can thereby be obtained, or the patient saved the least degree of pain consequent upon the direct application of manual force in a less potential and subsidiary posture.

6. That the three important factors that may be evoked in the genu-pectoral posture as applied in the reduction of uterine displacements, are: First, the force of gravity; second, the force of pneumatic pressure; and third, the force of the intra-abdominal detraction, variously termed "suction," "draught of the viscera" (Campbell), "suction or traction away from the pelvic organs," "*vis a fronte*" (Mundé), "negative intra-abdominal pressure" (Solger).

7. That self-replacement, when properly understood and employed, is an admirable conception and a most valuable resource.