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POSTURE IN RELATION TO OBSTETRICS AND GYNECOLOGY.[1]

BY

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(With fifteen illustrations.)

Introduction.—Though there may be little that is novel or striking in reference to posture that I may introduce to this audience, I shall yet endeavor to bring together certain salient features relating to this important question, with a view to make them easily accessible to the searcher for information on the subject. Most of the literature relating to posture is scattered here and there through text-books that only daintily refer to it, or else in journals that an index catalogue of several quarto volumes is required to make available. If the question should be raised as to the propriety of taking up the time of a learned body like this with such an elementary subject as posture, an answer may be found in part in the foregoing fact, and in other part in the suggestion that it is sometimes well to review elementary principles in order to gather up whatever useful information may have developed since a previous rehearsal, that it may be added to the sum total of knowledge on any subject under consideration.

It has been a recognized fact for many years that posture exercises no small degree of influence in the causation and perpetuation of pelvic disease. There appears to be no good reason why the aid of posture should not be invoked in the cure of the maladies which it has played an important part either in producing or maintaining. Indeed, this principle has been well understood and amply carried out in practice by many physicians. The law of gravity prevails everywhere alike in nature, and the fluids as well as the solids of the body

[1] Read at the fifth annual meeting of the American Association of Obstetricians and Gynecologists, St. Louis, Mo., September 20th, 1892.

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must obey the same decrees that govern the outside world. The reproductive organs of women are so generously supplied with blood vessels that they are peculiarly susceptible to the influences of gravity; it is so in health, and it is even doubly so in disease, when the pelvic organs are increased in bulk or changed in structure, form, or location.

In the pursuit of this subject I have found it somewhat difficult to illustrate the various postures without employing a nude model, since any drapery obscures many important details that ought not to be omitted. One can easily demonstrate the essential factors of posture clinically with a draped figure, but when an attempt is made to reproduce all its various details in a picture the artist is embarrassed in the truthful portrayal of the subject by the drapery; hence I shall show you in the course of this dissertation a number of illustrations taken from a nude model.

The Erect Posture.—A distinguishing characteristic of the human species abides in the fact that it assumes the erect posture instead of the crawling or horizontal all-fours of the brute animal kingdom. This is one of the most important postures with which we have to deal, since it is one which is so involved in the etiology of pelvic disease. It is the posture of good health, and it is likewise the posture of pernicious disease, the difference only being between its correct and incorrect assumption and maintenance. The erect posture correctly assumed and habitually maintained means a strong foundation for good health in a woman from youth to age; it means more than can be told in a single paper of the limit ordinarily allowed in this Association; and it means particularly that physicians should pay great attention—more attention, I am sorry to say, than they usually do—toward encouraging the maintenance of the correctly assumed erect posture, either as a preventive or a curative measure.

This posture is not as easily shown, either in its correct or incorrect poses, by photographic reproductions as are the others, hence I resort to schematic diagrams to illustrate its essential features. The first I show you are two diagrams taken from Aveling's treatise on posture,[1] that serve to illus-

[1] "The Influence of Posture on Women in Gynecic and Obstetric Practice." By J. H. Aveling. Philadelphia: Lindsay & Blakiston, 1878.

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trate the difference in the gravity line in the erect and slightly stooping poses. In Fig. 1 it will be observed that it impinges at or near the symphysis pubis, while in Fig. 2 it falls near the centre of the pelvic plane. The effect of pressure on the abdominal and pelvic viscera is more accentuated in Fig. 3, which is drawn to illustrate the gravity pressure on a retroverted womb, which in turn should be contrasted with Fig. 4, that of a healthful woman in the correctly assumed erect attitude. Figs. 3 and 4 are modified from drawings made by Dr. W. B. Dewees illustrating a paper on "External Support in Gynecology," presented by him to the Inter-

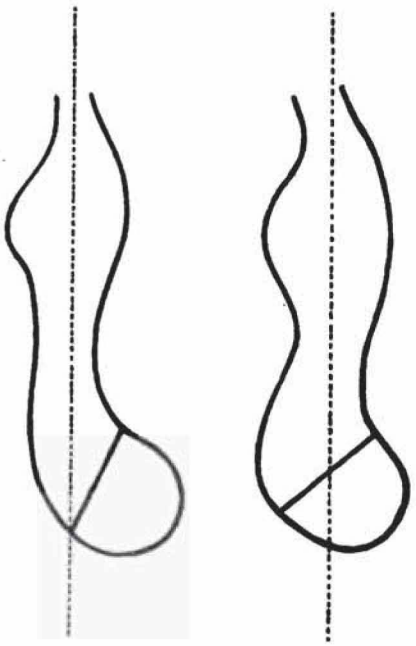

FIG. 1. FIG. 2.
Modified from Aveling.

national Congress of Gynecology lately held in Brussels, and which he has kindly permitted me to use. They are disproportionate as to the length of the lower extremities, but this is immaterial for the purpose in view. It will be observed in Fig. 4 that the occiput and the heels, B B, are on a line, that the nose, groin, and great toes, C C, also are at the same perpendicular, and it may be added that the slightly flexed elbows, could they be shown, would rest at the same perpendicular. It is my constant habit to instruct women who consult me to assume this posture several times during the day, placing the heels against a door or other perpendicular,

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and standing so that the hips, elbows, and occiput touch the same perpendicular line. This will aid in establishing a custom of correctness where the figure has become slightly stooped from habit. The practice of light gymnastics, under the eye of a competent teacher, is a supplementary aid to the gynecological management of many of these cases of great value.

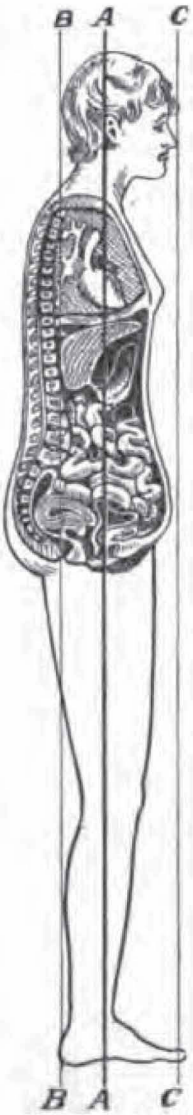

FIG. 3.

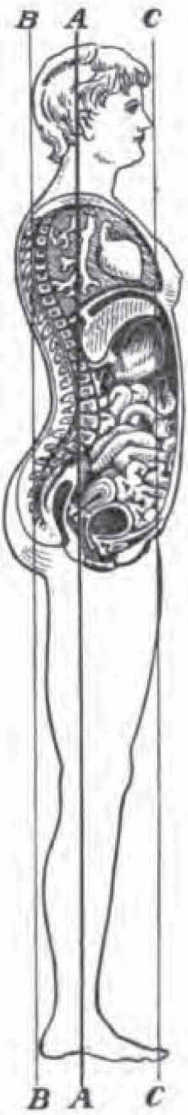

FIG. 4.

Modified from Dewees.

These diagrams point a lesson which is told at a single glance. It will be observed that the gravity pressure here is greatest near the centre of the pelvic plane, hence must necessarily crowd downward the organs, tissues, and blood vessels that are chiefly concerned in the maintenance of a

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woman's health and characteristics; whereas in the correctly assumed erect posture it impinges at the symphysis pubis.

If it be true that a considerable proportion of pelvic inflammations are of a nature, either because of their origin or destructive tendency, to require abdominal section for their cure, there is still a goodly number, benign in character and less destructive in their course, that may be cured by less formidable treatment, or even prevented altogether if proper attention is paid to posture, hygiene, dress, and food. We have only to bear in mind the complex nature of the supply of blood to the pelvic structures to better appreciate the influence of posture on the sexual organs. The blood vessels and nerves are so interwoven and doubled upon themselves that in attempting to trace them one becomes almost lost in the mazy labyrinth of vessel and fibre, so intricate is the network of connective tissue, vein, artery, and nerve.

The nidus of pelvic inflammation may be, and oftentimes is, a mere trifle—possibly a slight irritation arising from that unknown quantity which we so succinctly formulate in the expression "taking cold." This, in a patient prone to menstrual disturbances, may be all-sufficient to provoke serious and prolonged pelvic disease. I am now referring, of course, to those inflammatory processes which arise independently of infection, either traumatic, puerperal, or specific. Whatever the cause of the irritation may be, the first result is hypervascularity—hyperemia. This hyperemia causes arterial tension, which in turn increases blood pressure, and this carries us to the stage of congestion. Congestion creates an exaltation of nervous force, when we have the resultant nerve turmoil; and this phenomenon produces dilatation of the arterioles, which in turn brings us to the point of inflammation. With the inflammatory process fully inaugurated, the veins at once become unable to return the increased quantity of blood sent to the parts, and we find true blood stasis established. In the class of inflammations now under consideration, those that usually fail to end in suppuration but turn themselves toward resolution, we find it very easy for Nature to establish subinvolution, which means chronic blood stasis. The law of gravity now acting, as I have just pointed out, upon these overdistended vessels, serves to keep up the dis-

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ease and its resultant reflexes, unless arrested by proper management, for an almost indefinite period. Hence it becomes of the highest importance to thoroughly understand the physics of posture and to apply this knowledge to the relief of patients who suffer from blood stasis.

It is not difficult to point out the woman in the street or social throng who is apparently free from pelvic disease, and it is quite as easy to differentiate those who are less fortunate in this respect. If the imperfect erect posture is easy of detection, and its baneful influences are correspondingly simple to demonstrate, not so with reference to its correction. Many difficulties lie across our path when we attempt to establish

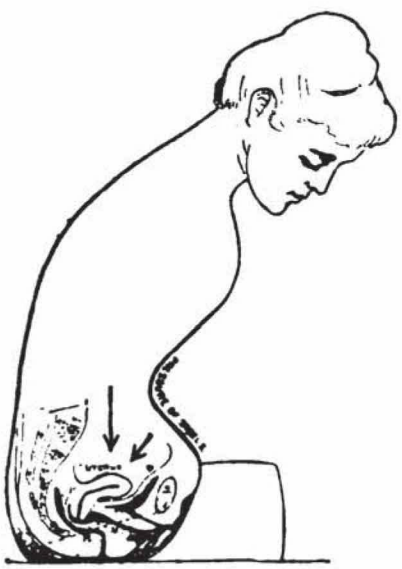

FIG. 5.—The faulty sitting posture. (Dickinson.)

the habit of properly sitting or standing erect, in a woman who has become round-shouldered and stooping through the maintenance for many years of these evil practices. Occupation, dress, food, and impure air all play an important part in keeping alive these faults of posture. The seamstress, shop-girl, sewing-machine operator, and various other classes of women engaged in sedentary work of the so-called lighter order, become easy victims of those pelvic disorders that are entailed or aggravated by their methods and habits of life. They stand during long hours without rest, or sit in a cramped and stooping attitude (see Fig. 5) that overloads the pelvic organs with blood and displaces, overlaps, crowds, or otherwise disturbs their normal place, size, or function. Dr.

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R. L. Dickinson, of Brooklyn, in an article on diseases of the uterus published in Hare's "System of Therapeutics," vol. iii., has discoursed upon the evils of fashionable dress in a comprehensive and forceful manner. I am indebted to the author and the publishers, Messrs. Lea Brothers & Co., for the illustration—Fig. 5—of a girl bending forward at work. It admirably delineates a point that I desire to accentuate. The direful influence of the corset, and the evils resultant from wearing ill-fitting shoes with high heels, need not be enlarged upon at this time. I cannot, however, let this opportunity pass, because it is pertinent to the subject, to remark that dressmakers, modistes, and corsetmakers are most dangerous enemies of woman, because they insidiously betray her into the habit of wearing tight-fitting clothing that is not only pernicious in its effects, but prevents or thwarts all attempts at cure. So, too, with regard to foul air and imperfect nutrition. Many of these women spend their days in shops, offices, or rooms in which perfect oxygenation is unknown, only to return to their homes and sleeping apartments where the air is still worse; while to good appetites, wholesome food, and perfect digestion they are either casual acquaintances or total strangers. Hence it is not singular that systemic faults are established which serve to increase the postural errors, and thus we have a complex interplay of cause and effect that is as difficult to differentiate as to remove.

But the erect posture has some importance with reference to obstetrics and gynecology other than to produce or cure disease. In the obstetrical field it becomes of aid in the diagnosis of pregnancy during its earlier months, and is chiefly concerned in this regard with reference to the employment of ballottement. An analogous use of this posture in the diagnosis of pelvic disease makes it sometimes useful with reference to the differentiation of tumors, cystic and solid. The methods of using the erect posture for diagnosis will at once suggest themselves to the expert, and need not be enumerated in detail. My purpose is simply to call attention to the fact that it may be of vast use in the management of both obstetrical and gynecological patients, if it is properly employed.

The Horizontal Posture.—The next posture in the natural

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order of sequence, the antipode of the erect, is the horizontal recumbent posture. The chief obstetric use of this posture may be described in a word—namely, for the employment of palpation. Since the diagnosis of pregnancy is largely made by the touch, and since the position of the fetus in the advanced months of gestation can almost invariably be ascertained by palpating the abdomen, the horizontal posture may be fairly placed among the obstetric positions. In it especially the fetal heart can be best heard and differentiated.

Its gynecological advantages are also related to the diagnosis of abdominal diseases and growths, and especially is it of importance with reference to the diagnosis of appendicitis. It is the posture, *par excellence*, for the employment of palpa-

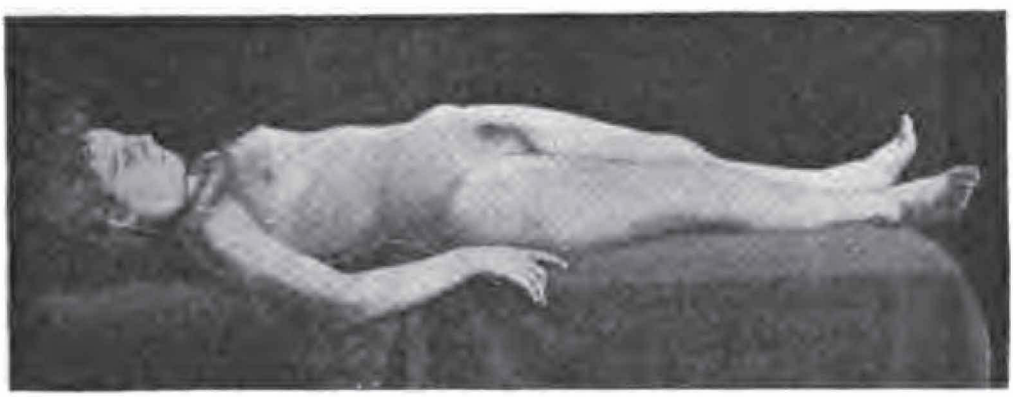

FIG. 6.—The horizontal posture.

tion, either with the lower extremities extended or flexed. The abdominal surgeon has occasion to habitually use it, as it is the posture of operative procedure in nearly all his work. I have illustrated the horizontal posture for the purpose of showing its proper maintenance as well as its contrast to the erect posture, and also to bring the anatomical landmarks prominently into the mental field. In this figure we discover the abdominal divisions strongly marked, such as the lower margin of the ribs, the umbilicus, the promontories of the iliac spines, and the symphysis pubis.

The Dorsal Posture.—This naturally comes next to the horizontal for consideration, and is really only a modification of it. It may be divided into the dorsal recumbent, the dorsal elevated, and the dorso-sacral postures.

The dorsal postures with the extremities moderately flexed

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are used in various obstetrical and gynecological procedures; they only need enumeration to suggest their value and importance. In some countries it is the habit to confine a woman in the dorsal posture, which under certain conditions possesses some advantages. It is, however, one of discomfort to the accoucheur, and is more provocative of genital lacerations than the left lateral position, which is generally chosen, for delivery in this country. During the first stages of labor however, it may be permitted with some degree of propriety as also the erect posture may be allowed during this stage, for they both prove restful to the woman, and present an op-

FIG. 7.—The dorsal recumbent posture.

portunity for the law of gravitation to act in promoting dilatation of the maternal parts. It is, furthermore, the posture for the application of the obstetric forceps and for the repair of such lesions as may have occurred during the process of parturition.

Its gynecological importance is great. It affords the most perfect opportunity for digital investigation of the accessible portion of the genital tract, and it also permits the most complete employment of bimanual palpation. In gynecological diagnosis, however, it will often be found a valuable aid to elevate the patient at an angle of thirty degrees or more (Fig. 8), as affording a more thorough opportunity for the

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digital exploration of the genital tract and the further employment of the bimanual. These four figures (7, 8, 9, and 10) will illustrate the dorsal posture with views in its several modifications.

The dorso-sacral posture is the posture of gynecological operations upon the genital tract. Perineal lacerations are readily inspected and repaired in this posture, as well as some other lesions not necessary to enumerate now. It is the posture to be chosen for the performance of vaginal hysterec-

FIG. 8.—The dorsal elevated posture.

tomy, and is generally known and described by surgeons under the head of the lithotomy position.

Finally, the dorsal position is employed in the diagnosis and treatment of diseases of the urethra and bladder in the majority of cases other than those requiring surgery.

The Genu-pectoral Posture.—The genu-pectoral posture is a posture of great capabilities in reference to the management of diseases of women, and it is likewise capable of many applications in the field of obstetrics. In the latter we often find it of use in replacing a prolapsed funis; it also aids in unshipping an impacted head, and it has been resorted to with avail in the management of transverse presentations where

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other postures had brought only failure.[1] I have been informed by a professional friend that he has even been able to apply the forceps successfully in the genu-pectoral posture after failure in the usual forceps position.

In gynecology we find it of great usefulness in replacing a retroverted uterus or a prolapsed ovary. The influence of gravity in adding to or increasing the degree of retroversion is very great. Hence by a reversal of gravity we may in-

FIG. 9.—The dorso-sacral posture—lateral view.

voke its law in overcoming the conditions that it has contributed to produce. With a woman properly placed in the genu-pectoral position, a dislocated uterus will oftentimes unaided gravitate to its proper level. In other cases it will require some little *vis a tergo* applied by the examining finger or fingers, and in still others a slight pressure made with a cotton-mounted probe will succeed in carrying it to its place. Having accomplished this, the problem of holding it

[1] Barnum, Buffalo Medical and Surgical Journal, 1892, p. 385.

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there is often presented to the gynecologist. In a suitable case without adhesions, and after adequate preparatory treatment, a pessary will often accomplish the desired result. I make the assertion, and I affirm it with all the cogent force of speech, that if a pessary becomes necessary there is really no other position so capable of affording to it all its advantages, that so facilitates its introduction, and that gives the woman so little discomfort in its application, as the genu-pectoral posture. Moreover, it is competent to direct a patient wearing a pessary to assume this posture at intervals during

FIG. 10.—The dorso-sacral posture—oblique view.

each day, for the purpose of unshipping impaction and relieving any intrapelvic pressure that may result, and to unload the vessels from the overdistention and fulness that gravitation has caused.

This is the posture that enabled the immortal Sims to develop his operation for vesico-vaginal fistula, and it led to his discovery of the modification of this pose, now known as the semi-prone, or Sims' posture. It is not easy to forget Sims' graphic description of his accidental rediscovery of the principles that have served to make the genu-pectoral posture so valuable in the field of gynecology. I may be pardoned for a brief reference to this most interesting chapter

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in medical history. In the summer of 1845 a woman, riding in the suburbs of Montgomery, Ala., where Dr. Sims then resided, was thrown from her horse and suffered a sudden, acute dislocation of the uterus. In great pain she was taken to a near residence and Dr. Sims was summoned. He tried in various ways to relieve her, without avail, but finally placed her in the knee-chest posture and introduced two fingers into the vagina. In a moment her pain departed and she exclaimed, "I am relieved." While studying over the problem as to how this had been accomplished, his patient threw

FIG. 11.—The genu-pectoral posture.

herself down upon her side, when a sudden, loud escapement of air from the vagina told the story. The organ had gravitated toward the epigastrium and the air had filled the vagina, distending it like a balloon. It came out with an explosive sound on the change of position, and thus the mystery was solved. The dislocated uterus had been reduced by the conjunction of the two forces—gravitation and air pressure. Dr. Sims readily applied this phenomenon to the treatment of several cases of vesico-vaginal fistula—an accident of parturition theretofore incurable. This was the turning point in the history of gynecology; an epoch was marked. The

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gynecological universe there and then changed front, and the modern school of gynecology was established in that humble, inconspicuous dwelling.

The late Dr. Henry F. Campbell, of Augusta, Ga., has written voluminously upon the physics of this posture and its application to the treatment of pelvic disease. My experience with it only confirms to a considerable extent the observations of Dr. Campbell. Bozeman, of New York, still prefers the genu-pectoral, or rather his modification of it,

FIG. 12.—The knees-elbows posture.

for fistula operations, in which he has attained conspicuous success by the employment of his button suture adjusted in this posture. I speak from a large experience in the management of pelvic diseases when I say that—leaving out, of course, all operative cases—I should be compelled to practically abandon the practice of gynecology if I was to be deprived of the benefits of the genu-pectoral posture. Another advantage connected with this posture resides in the fact that the intestinal canal can be inflated or flushed better with a patient in this attitude, in which the long rectal tube

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can be passed with more convenience and less discomfort. The knees-elbows posture (Fig. 12), which is only a modification of the genu-pectoral, may be resorted to in cases where it is not competent or possible to employ the classical knee-chest posture.

Let me speak for a moment as to the method of assuming this important pose. To begin with, a table or other firm foundation is necessary. Presuming that a table is used, its top forms the horizontal of a right-angled triangle which is to be completed by the patient's body. In this geometrical figure the thighs furnish the upright and the body the hypothenuse, when we thus have the triangle complete. I lay great stress upon the method of assuming this posture. Failure has over

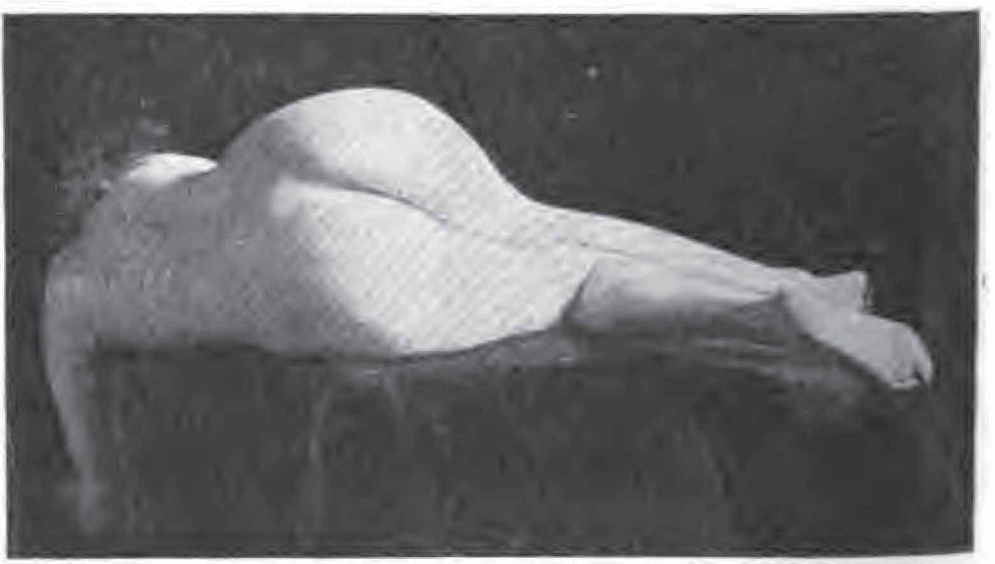

Fig. 18.—The semi-prone posture—posterior view.

and over again come to the novice or amateur who has been directed to place his patient in this posture for obstetrical or gynecological purposes. The triangle figure is the one of greatest import and the easiest remembered. If the thighs are oblique, making the angle either obtuse or acute, gravity will be impeded. A woman once properly placed in the genu-pectoral posture, the abdominal organs, especially the intestines, gravitate toward the diaphragm, the vessels unload themselves, and with comparative ease we may correct a retroverted womb, and apply the necessary mechanical treatment to retain it in position with the least possible discomfort to the patient.

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It has been asserted that women will either refuse altogether to take this position, or, having taken it, will not keep it long enough to permit the necessary treatment of their conditions. I have never yet met such a woman. I am in the habit of using this posture daily, and, after a full explanation and understanding of it, my patients are more than satisfied that it is easy and effective. This is especially the case with women who have been treated by physicians who do not employ this posture, the contrast in postural ease and facility of treatment being so great as to occasion remark.

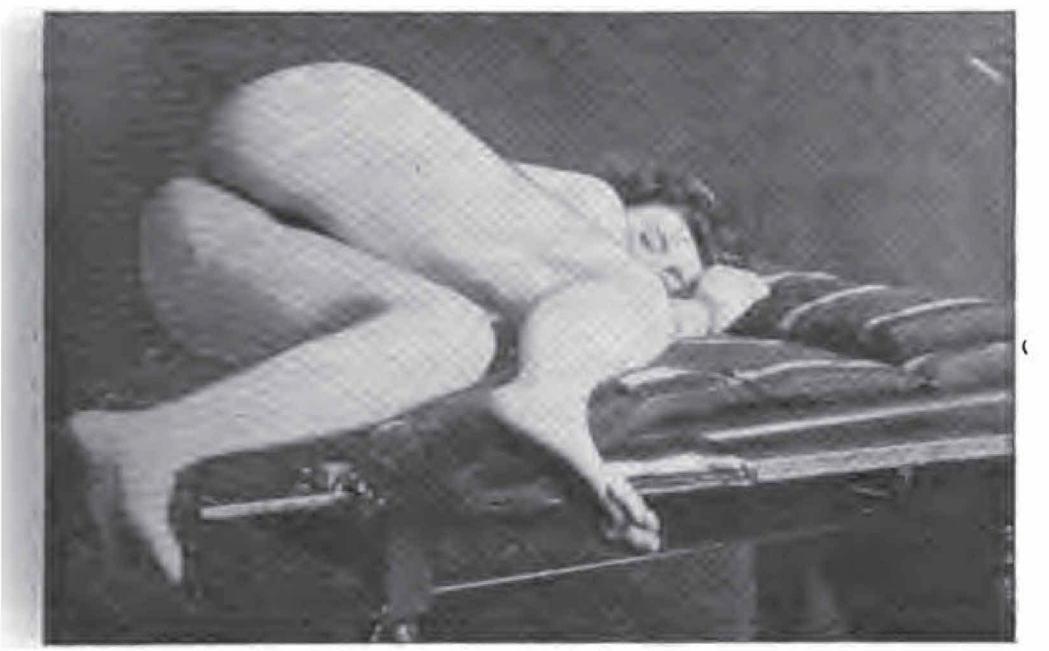

FIG. 14.—The semi-prone posture—anterior view.

The Semi-prone Posture.—It is to the genius of Sims, as I have before hinted, that gynecology owes many of its most substantial improvements. This may be said to apply either to instruments or methods. It has been asserted that it were as well to give up the practice of gynecology as to attempt to do without the Sims posture and the Sims speculum. It certainly is an important pose, both with reference to minor and to operative treatment within the genital tract. But in order to obtain its greatest benefits and its most substantial results, this posture must be properly studied by the physician, and he must acquire dexterity in the several uses of this

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pose. Strictly speaking, the semi-prone position is not an obstetrical posture, but it is so nearly allied to the left lateral recumbent that it easily becomes blended with it in some obstetrical procedures. It is a suitable posture for all manipulation connected with the curettement of the uterus, whether for retained secundines after abortion or for neoplasms or other abnormal conditions of the endometrium. Some operators, however, prefer the dorsal elevated postures for this operation. It is the essential posture for intra-uterine irrigation after labor, when that procedure becomes necessary. There are very few intra-uterine processes of instrumentation that are not better performed with the patient in the semi-prone pose than in any other. The tamponade of the vagina for uterine hemorrhage can be adequately performed in this position, and it is the principal posture for rectal explorations. The hot rectal lavement administered through the long tube is rendered more efficient, because more certain of its reaching the high portions of the intestines, when administered with the patient either in this attitude or in the genu-pectoral posture.

It has been my experience on one or more occasions that forceps could be applied in the Sims posture after failure in all others. It is a posture that is often misunderstood, because frequently illustrations are misleading. I have endeavored to represent it faithfully in the photographs which I reproduce, though I confess it is not an easy matter to properly pose a patient in this attitude and then reproduce it accurately. I first show the posterior semi-prone, which will accentuate the fact that the right knee and thigh are drawn well above the left, and also that the left arm is released and hangs over the edge of the table, while the patient's chest comes in contact with its top. Sometimes it is requisite to give the table a tilt after the patient is posed, but I have found this rarely necessary unless there were some marked anatomical peculiarities in the patient.

Trendelenburg's Posture.—The Trendelenburg posture has been made use of chiefly by abdominal surgeons, who have been led to believe that the gravitation of the abdominal viscera toward the diaphragm would overcome many difficulties that otherwise frequently occur during the progress of opera-

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tions. Probably there is no one operative posture that is the subject of more disagreement just now than this. Some operators laud it beyond reason, while others decry it with a wholesale condemnation. It is highly probable that this posture, which means that the patient's body shall recline at an angle of about forty-five degrees, has some advantages which make it important to consider, and at least to be familiar with; but it is not probable that it will ever supplant the ordinary

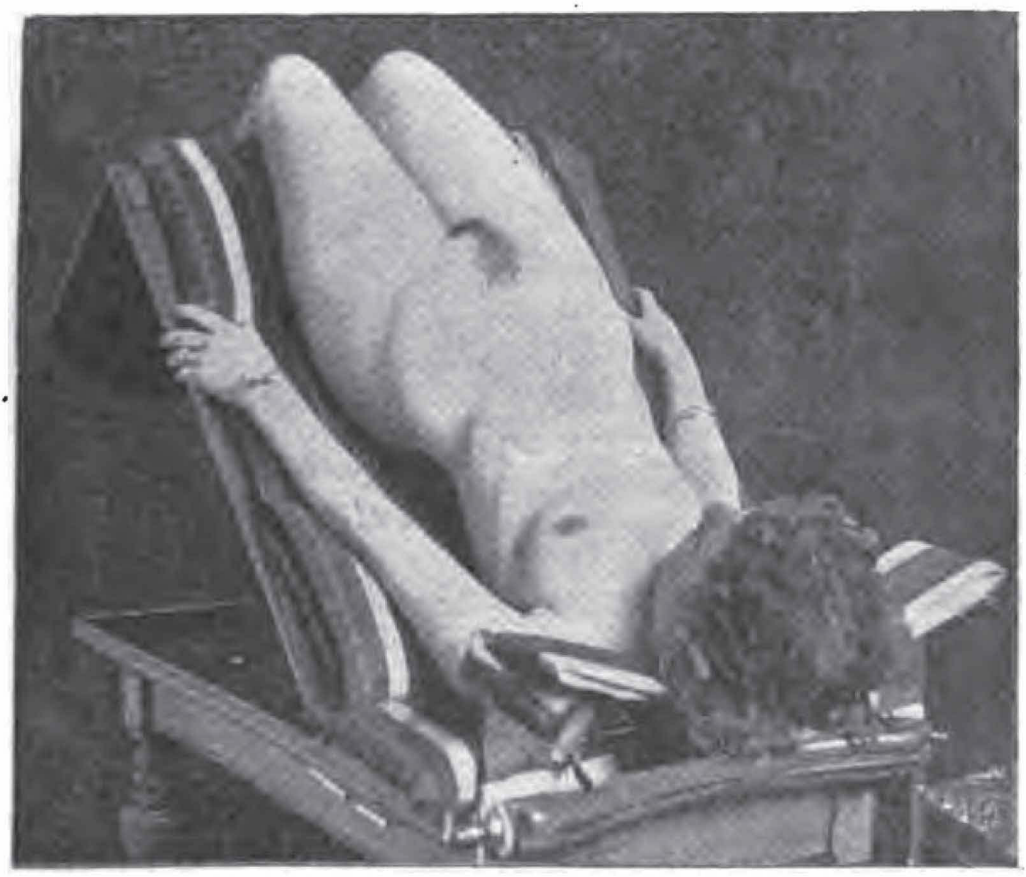

FIG. 15.—The Trendelenburg posture.

horizontal pose for the largest number of abdominal sections in the hands of the largest number of operators.

The modified Trendelenburg posture, with the entire lower extremities elevated at an angle of fifteen to twenty degrees, sometimes is available in producing a reversal of gravity in pelvic disease. I have myself employed it with advantage. It is advocated by Emmet very strongly. I remember a patient that I attended about eight years ago that seemed to be nearly or quite cured from a threatened grave pelvic inflam-

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mation by the persistent use of the elevated posture *à la* Trendelenburg modified.

But if I should undertake to describe all the details and uses of the various postures that will suggest themselves to active, energetic practitioners, it would not only consume too much of your valuable time, but it would be wearisome to your patience as well as uncomplimentary to your intelligence. My purpose has been to group the most practical postures, illustrate them intelligently, and discourse upon them as briefly as is consistent with the importance of the subject. I hope I have at least partly succeeded.

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