THE WALCHER, THE TRENDELENBURG, AND THE MERCURIO POSTURES IN MIDWIFERY:[1]

BIBLIOGRAPHICAL NOTES.

BY

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(With nine illustrations.)

THE important place accorded to posture in delivery by the programme of the August meeting of the International Congress of Gynecology in Amsterdam justifies a review of this confused matter.

Geronimo Scipio Mercurio, who lived between 1550 and 1595, published a little volume of essays entitled "La Commare o Riccoglitrice." The first edition is dated 1595. There was a

FIG. 1.—Hanging dorsal posture, 1595. (Mercurio.)

German edition of this book for midwives issued in Leipzig in 1652. Among the crude woodcuts occur those here given as Figs. 1, 2, and 4. Witkowski, in his "Histoire des Accouche-

[1] The nomenclature proposed by the author in his illustrated paper in the December JOURNAL was: Walcher, the hanging dorsal posture; Trendelenburg, the inclined dorsal; Mercurio, the arched dorsal; the posture of ordinary examinations, the half-flexed dorsal; and that used in operations on the back, the full-flexed dorsal posture.

ments chez tous les Peuples,"[1] from whom I have borrowed the cuts, has had them redrawn, but without modifying any material detail. The Walcher, or hanging dorsal, posture picture occurs in the edition of 1595, according to Witkowski, and the edition of 1601, the earliest to which I have access, contains the cut of the arched dorsal posture.[2]

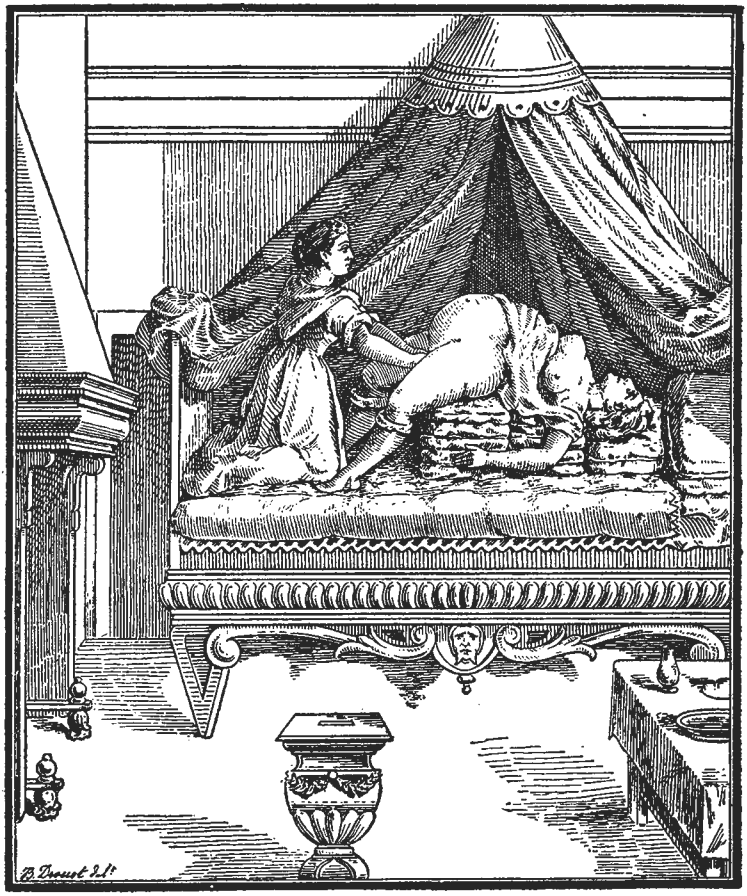

FIG. 2.

EXPLANATION OF WOODCUT OF ARCHED DORSAL POSTURE IN MERCURIO'S "COMMARE."

Sito necessarissimo in ogni parto vitioso nel quale si debbono collocare tutti le gravide, che difficilmente partoriscono per quale si voglia causa.

(The position most necessary in every faulty birth, in which all parturients ought to be placed when for any reason whatever the labor is difficult.)

I am inclined to say with Mercurio that there are obstetric emergencies in which the latter posture is "necessarissimo."

In his first chapter on abnormal labor, Mercurio[3] says:

[1] 714 pages, 8vo, Paris, Steinheil, 1877.

[2] See also Engelmann: "Labor among Primitive Peoples," Chambers, St. Louis, 1884. Ploss: "Das Weib in der Natur- und Völkerkunden," Leipzig, Fernau, 1891.

[3] "La Commare o Riccoglitrice." Del Ecc. G. Scipion. Mercurii. Pp. 407. Gio. Bai. Ciotti, Venetia, 1601. Reference to description of position on page 140 et seq. Woodcut on page 143.

"The following appropriate position will be necessitated under these conditions and moreover in every other variety of faulty birth. This position is illustrated by a cut, but for the sake of greater lucidity it is hereby described." "The parturient is placed upon her back in bed. Cushions are arranged beneath her shoulders, and are proportionally made higher until the nates are reached, in such manner that there is an incline from the nates down to the shoulders, the head hanging back upon the bed."

Mercurio directs the midwife to examine the woman in this position and to attempt to reduce the faulty position by manipulation. He then continues:

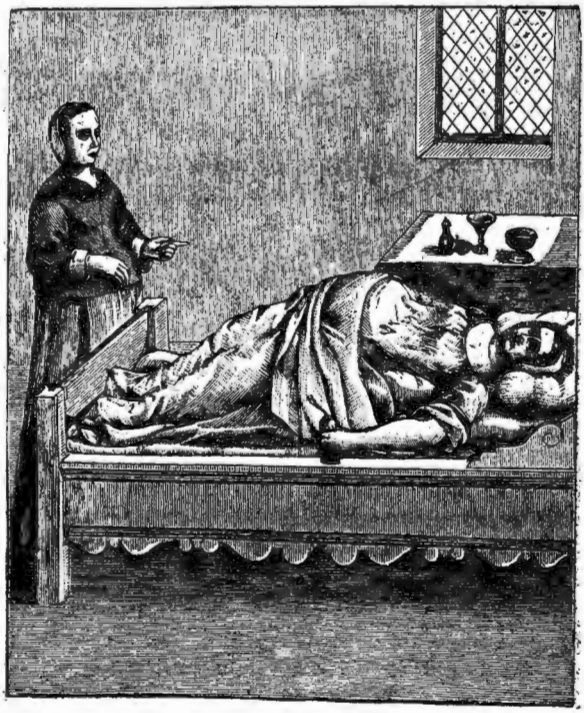

FIG. 3.—Arched dorsal posture as shown in the German edition of Mercurio by Welsch.

"There is an error not only of midwives but of certain physicians whom I have seen operate in such cases. In attempting to reduce the head to the normal position they place the parturient in an armchair, not perceiving that this position is most opposed to the mechanism of labor. When this is done the weight of the child plus the downward pressure of the intestines forces the said child into a faulty position which neither diligence nor force may correct, and I have seen both mother and child perish on several occasions under these circumstances.

"I arrange the parturient in the supine position, head

hanging and all the trunk elevated in the manner already described, so that the midwife is enabled to bestride the abdomen of the mother and thus expel the fetus from the straits within, for this procedure appears to cause the fetus to assume a position natural to labor."

Throughout the chapters on faulty labor there are allusions to this position, but nothing not included in the foregoing.

Corradi[1] says that "Scipio Mercurio's teachings were the reverse of those of the Greeks and Arabians. He did not require the parturient to lie prone or get upon all-fours, but placed her on her knees, with thighs spread apart and body bent backward so that the head touched the ground, etc."

Corradi here describes the "fat woman's position," and does not in this connection mention the "hanging incline," reserv-

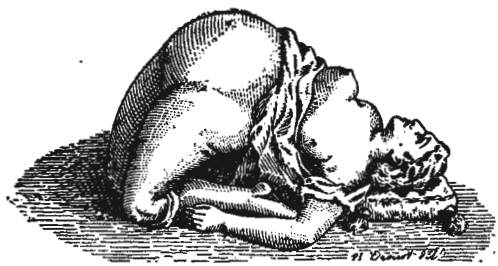

FIG. 4.—"Fat woman's" posture. (Mercurio.)

ing it for another passage. He says further of the fat woman's position:

"He (Mercurio) affected to believe that this position was recommended by Avicenna. But what the latter really prescribed was for a fat woman to lie prone with head on ground and thighs flexed beneath abdomen."

After describing the obstetric chair, Corradi says: "But a substantial improvement in the obstetrical chair was not made for a century after the time of Gottfried Welsch. The latter translated Scipio Mercurio's 'Commare' into German. Our obstetrician (Mercurio) had severely reproved the midwives and physicians who made use of the obstetrical chair when the child was in a bad position. He thought the chair would make a bad position worse, and counselled that the parturient be placed supine in bed with the head lower than the rest of the body, which was supported by cushions so raised that the shoulders were lower than the nates. He advised this position

[1] "Dell' Ostetricia in Italia." Alfonso Corradi. Bologna, 1874. Pp. 1,640. Gamberini e Parmeggiani. Extracts are on pages 436 and 440.

for all puerperæ when labor from any cause was difficult, with the one exception of corpulence."

This hanging incline (*sdrucciolo pendente*), as Mercurio called it, did not prove useful enough to deserve a special apparatus, according to Corradi, nor did it merit the term "lectus imperialis" (imperial bed) given it by Kilian.[1]

Mercurio had no idea of enlarging the pelvic diameters. Everything shows that he was in complete ignorance of any rationale for his position; therefore it is hardly just for Klein[2] and La Torre[3] to seek to take away credit from Walcher, who says himself that Mercurio used the position, but empirically.

Siebold, in his valuable "Geschichte der Geburtslehre,"[4] takes the passage subjoined from a foot-note in Corradi's history explanatory of the term "imperial bed." The original is in Latin, translation as follows:

"A bed, otherwise known as imperial bed, a peculiar arrangement of pillows for obstetrical purposes, represented in a woodcut in Scipio's 'Commare.'"

(Corradi adds that a bed with canopy and curtains has nothing to do with the arrangement of pillows, which could take place as well on the floor of the lying-in room.)

Siebold dubs the posture "backbreaking." Osiander[5] mentions the position only to condemn it.

Fothergill[6] makes the point that the old picture of the hanging posture shows the feet supported by the floor, and that, therefore, traction by the legs on the innominate bones would not pull the symphysis away from the promontory. The same criticism must be made concerning the arched dorsal position in this three-century-old picture, as the feet rest upon the bed. The objection is unimportant, because the posture alone, even

[1] "Die operative Geburtshülfe." Von Dr. Herman Friedrich Kilian. Bonn, 1849. Pp. 860. Eduard Weber. Reference, p. 125.

The passage in Latin about *lectus imperialis*, the term used by Kilian, was found by him in this book.

"Commentatio de cubilibus sedilibusque usui obstetricio inservientibus.' Georg Christoph von Siebold. Gottingæ, 1790. J. C. Dieterich. Pp. 88. Reference, p. 68 (Corradi, p. 441, note).

[2] Zeitsch. f. Geb. u. Gyn., Bd. xxi., S. 74.

[3] Proceedings International Congress at Moscow.

[4] "Versuch einer Geschichte der Geburtshülfe." E. C. J. von Siebold. Berlin, 1839-1845. T. C. F. Enslin. In vol. i., p. 374, is a reference to the *lectus imperialis* (Corradi, p. 441, note). Siebold's "History of Obstetrics" has recently been translated into French and brought up to date by Hergott. Paris, 1893. Three vols.

[5] Lehrbuch der Entbindungskunst, Göttingen, 1799.

[6] Edin. Med. Jour., 1895-96, vol. i., p. 42.

without traction by means of the full weight of the leg, would probably do nearly all that posture plus the full weight of the leg could effect.

Sebastiano Melli republished the two cuts, in "La Comare Levatrice," Venezia, 1766. He says that Mercurio's position has relapsed into oblivion and that he attempted its revival.

Walcher, in the *Centralblatt für Gyn.*, 1889, Seite 892, has a short communication describing the use of the hanging dorsal posture in flattened pelves, and claims an increase of the true conjugate from eight to thirteen millimetres under certain circumstances. This difference is between the true conjugate in the fully-flexed dorsal and the hanging dorsal, *not* between the straight dorsal and the hanging dorsal. It is, however, legitimate to speak of the gain as averaging one centimetre, because the ordinary posture for forceps delivery had been a half-flexed or fully-flexed dorsal posture. He also draws attention to the shortening of the antero-posterior diameter of the outlet in his posture, due to the swinging forward of the tip of the sacrum.[1]

Walcher also says[2] that after the head has been pulled through the inlet by his procedure, the pelvic floor is most efficiently relaxed by changing the patient to the fully-flexed posture. His experiments were made on a few women in labor.

Matthews Duncan[3] had already demonstrated rotation at the sacro-iliac joints and showed the elongation due to such motions. He speaks of four to six millimetres alteration. Hermann Meyer[4] reached the same conclusion. Crouzat[5] found that by extension and flexion on the cadaver the true conjugate varied eight millimetres. Farabœuf is quoted by Currier[6] as agreeing with this.

Klein[7] reports a large number of experiments on cadavers. In an excellent paper, which, next to Küttner's, is the most thoroughgoing and scientific study of the postures I pictured,[8] he draws attention to the fact that the pivotal point of the axis of the swing of the symphysis is behind the joint, one centimetre to the rear of the middle of the second sacral vertebra. He

[1] Verh. d. Deut. Gesell. f. Gyn.. 1892, S. 448.

[2] Med. Cor. Blatt d. Würtemb. Aerz. Verein, Bd. lx., Heft 5.

[3] Dublin Quart. Med. Jour. for Med. Sci., 1854, xviii., p. 60.

[4] Arch. f. Anat. u. Entwicklungsgeschichte, 1878, S. 1.

[5] "De la Menstruation du Diametre Suboccipito-pubienne," Paris, 1881, p. 312.

[6] Med. News, 1896, p. 265.

[7] Zeitsch. f. Geburt. u. Gyn., Bd. xxi., S. 74.

[8] AMERICAN JOURNAL OF OBSTETRICS, Dec., 1898.

calls the pelvis in the hanging dorsal posture *das gedehnte Becken;* in the straight dorsal posture, *das ruhende Becken;* between the flexed and fully-flexed dorsal, *das gedrückte Becken;* in the fully-flexed dorsal, *das gepresste Becken.* None of the forty-seven cadavers were from the postpartum weeks.

Klein found that he could more easily shorten than lengthen a

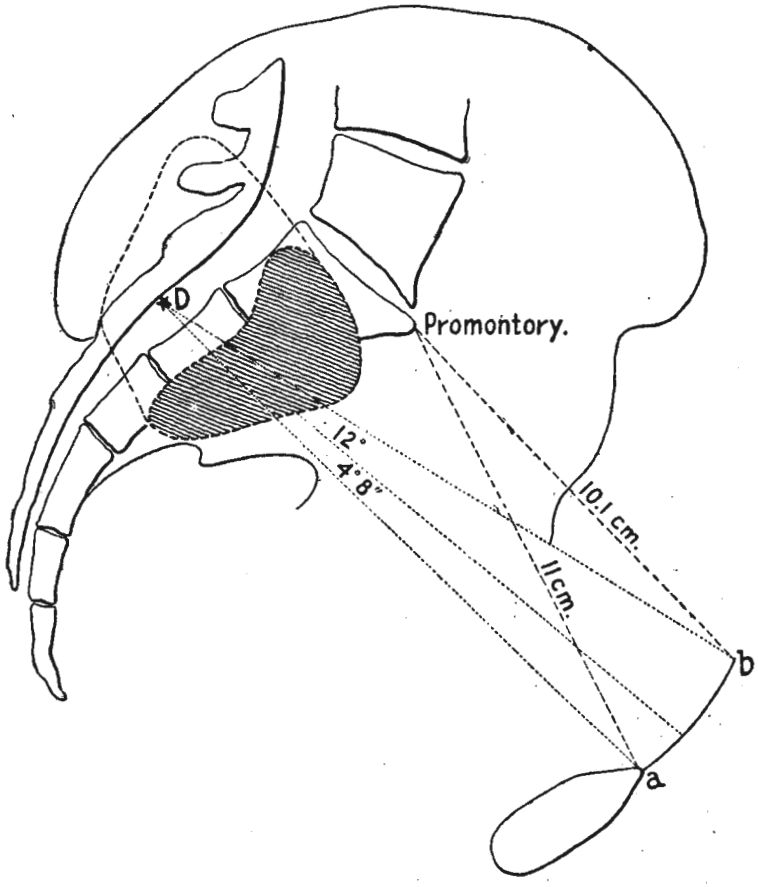

FIG. 5.—Rotation of the innominate bones about the centre "D." (Klein.)

true conjugate, starting in the straight dorsal posture. The average was about five millimetres either way. Walcher claimed that the gain is actually greater in flattened than in normal pelves. Klein found this to be true. The latter believes that three elements produce the lengthening in the vera—rotation, the sliding which takes place in the sacro-iliac joint, and the slight spring of the bones. The first is the only important one. A motion on the part of the symphysis of one centimetre up or down affects the vera three millimetres. The pull of the full leg weight is twenty-four to thirty kilogrammes (thirty-three pounds). He fears that the position is unbearable, and this criticism has weight for every other method but mine.

Fehling[1] strongly advocates a widespread use of the hanging dorsal posture, particularly in high forceps and head-last extractions. Dührssen's experiments[2] showed an average increase of nine millimetres in the Walcher posture. Wehle[3] reports success in various operative procedures—for instance, in a version with a true conjugate below eight centimetres. He thinks that twenty per cent more living children will be born through this means. Both Dührssen and Wehle prove that the usual posture for obstetric operations, namely, the full-flexed dorsal, actually shortens the antero-posterior diameter of the inlet, but that the hanging dorsal lengthens it.

Jewett[4] reports his results on several living subjects examined within two weeks after labor. The gain from Walcher's posture varied from .5 to .75 centimetre. In four non-puerperal pelves in the dissecting room the increase was four, five, six, and four millimetres. Bristow[5] measured three non-puerperal cadavers with extreme accuracy. The gain, comparing full flexion with full extension, was one-eighth of an inch (three millimetres) in each instance, from promontory to mid-symphysis, while the diameter from the subpubic arch to the tip of the sacrum was lessened one-sixteenth, one-sixteenth, and five-sixteenths inch respectively.

My paper read before the Brooklyn Gynecological Society in February, 1896, based on cases dating from the one detailed in the published paper, which occurred in April, 1894, was illustrated by cuts of sections and by the living model.[6] In December, 1898, I hunted up the literature here given.

Fehling[7] says: "I have in [three] cases [the earliest occurring in August, 1894], placed upon each other at the head of the bed, mattresses divided into three parts (*drei theilige Mattrazen*), so that the legs hung down freely inside the bed without touching the floor, while the buttocks lay exactly on the edge of the upper mattress. Of course the upper part of the body has a great tendency to slip down if it is not firmly supported against the headboard. This is done with towels broadly folded or with girdles which, passing under the armpit, hold the shoulder girdle up. In the same manner the hip region is fastened upward by a girdle passing on each side, broadly around the curve of the thigh." Currier speaks of Fehling's method as a modified

[1] Verh. d. Deut. Gesell. f. Gyn., 1893, p. 45. [2] Id., 1893, p. 47.
[3] Arch. f. Gyn., 1894, p. 325.
[4] Brooklyn Med. Jour., Nov., 1894, vol. viii., p. 653. [5] Id., p. 654.
[6] AMERICAN JOURNAL OF OBSTETRICS, Dec., 1898.
[7] Münch. Med. Wochenschrift, No. 41, Oct. 30, 1894, S. 861.

Trendelenburg posture. From Fehling's description it is not quite clear to me whether it covers my ground or not. I knew nothing of Fehling's posture or Currier's suggestion until three years after I began using the arched dorsal posture.

Currier,[1] in an article covering the subject well—with the exception of Klein's article—says in conclusion, in speaking of the discomforts of the Walcher posture: "It may be that this difficulty may be remedied by placing the patient in the Trendelenburg position, in which the condition of extension would be preserved."

Fothergill[2] thinks that the hanging dorsal posture relaxes the pelvic floor in the perineal stage, and the traction rods on the axis-traction forceps will, therefore, damage the perineal structure little. Herein he is at odds with Walcher himself, who places the patient in the full-flexed dorsal posture when the head reaches the pelvic floor, in order to lessen the danger of laceration.

Eiermann,[3] after quoting good results, says that the number of high forceps applications will be lessened by employment of the Walcher posture. Valuable service is rendered in delivery of the aftercoming head, and perforation of both head-first and head-last cases is rendered easier. It is in the minor grades of contraction that the procedure is chiefly of use.

Klein,[4] Pazzi,[5] La Torre, and Simanti[6] contribute historical notices of the hanging dorsal posture. Pazzi it was who, incorrectly, fastened Melli's name on the posture in conjunction with Walcher's. He has reported on the procedure for face cases with the chin to the rear.[7] Fothergill[8] gives encouraging reports. Jardine[9] gives an instance of happy issue with this proceeding, where, in five previous pregnancies, no living full-term child had been born: the true conjugate measured $2\frac{3}{4}$ inches; the child weighed $8\frac{1}{2}$ pounds.

Huppert's[10] observations on 28 cases of flat and generally contracted pelves lead him to state that in flat pelves with true conjugates down to 7 centimetres (eventually lower) and in generally contracted pelves down to 7.5 centimetres (seldom lower) spontaneous labors in vertex presentations are rendered possible. In this classification should be included normal pelves

[1] Med. News, March 7, 1896, p. 265. [2] Edin. Med. Jour., 1895, p. 142.
[3] Die Praxis, Frankfurt-a-M., 1896, No. 9.
[4] Centralbl. für Gyn., 1897, No. 45. [5] Atti della Soc. ital. di Ost. e Gin.
[6] Proceedings Moscow Intern. Congress.
[7] Rassegna di Ost. e Gin., 1896, Nov.-Dec. Ref. Centralbl. f. Gyn., No. 32, 999. [8] British Med. Jour., 1896, No. 1870.
[9] Glasgow Med. Jour., April, 1897. [10] Arch. f. Gyn., Bd. lvi., pp. 199.

with abnormally large children. Huppert gives the following indications: good quality of contractions, ruptured membranes, obliterated cervix, vertex presentation. Even in greater relative disproportion where spontaneous delivery is not to be expected, operative procedures are rendered easier and the child's chances bettered. Huppert even states that the lowest limit of contraction in which he succeeded in delivering a living child (49.5 centimetres in length, 2,850 grammes) fell within the class for Cesarean section for relative indication. Huppert says that the posture produced most effect when the head, still somewhat movable, lay in the inlet or projected little into the true pelvis. When more deeply engaged no progress is to be

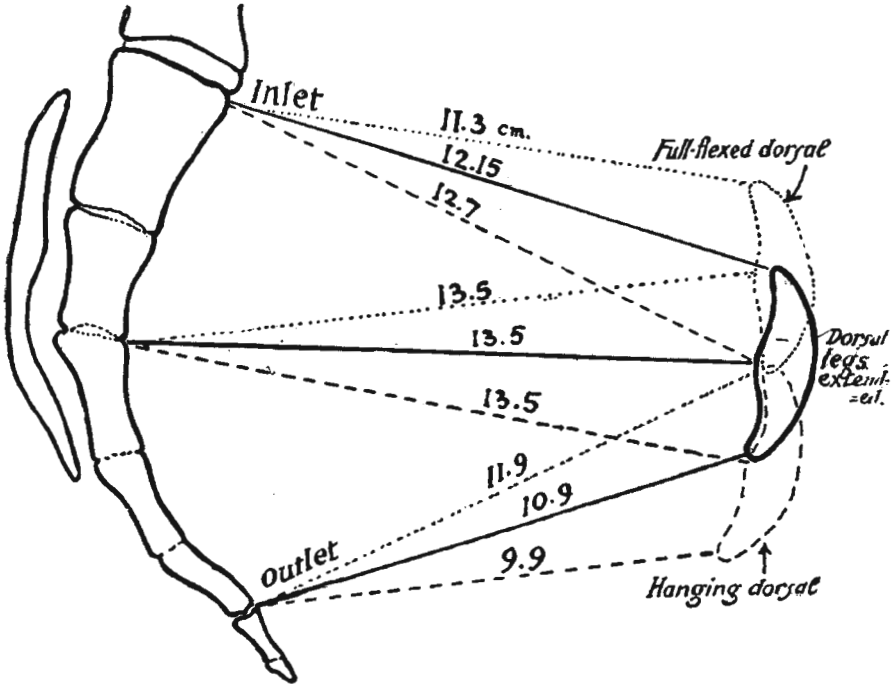

FIG. 6.—Pulling down of symphysis and longer vera in hanging dorsal posture. (Küttner.)

expected from the posture. In half the cases the effect followed promptly.

Schmidt [1] had employed the full-flexed dorsal posture for eight years to increase the diameters of the outlet when the head was stationary in the pelvic cavity or at its outlet, thereby lessening the percentage of his low forceps extractions.

Von Küttner,[2] in a paper containing an excellent critical review of previous researches, reports exact results on entire puerperal cadavers, not on pelves alone as did Klein. He took

[1] Centralbl. f. Gyn., 1897, p. 1394.

[2] "Experimental Investigations upon the Alterability of the Pelvic Space in Parturients." Beiträge zur Geburtshilfe und Gynäkologie, 1898, i., Heft 2.

plaster casts of the pelvic cavity by an ingenious method in each of the three postures, hanging, straight, and full-flexed

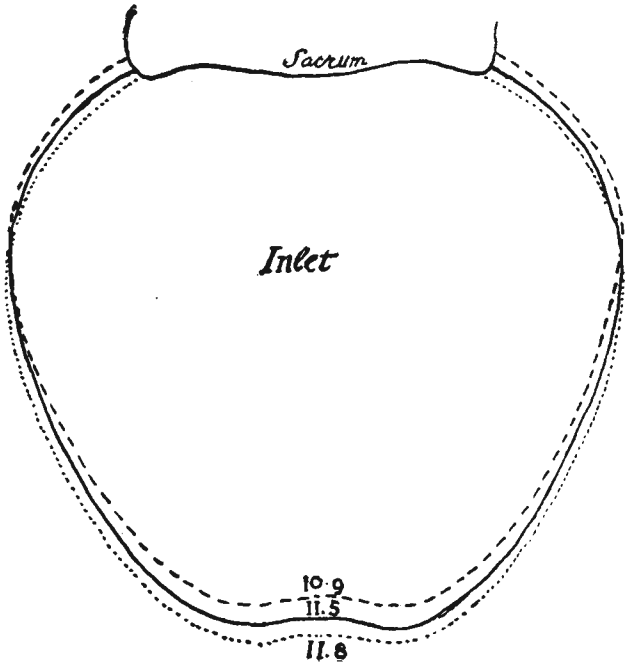

FIG. 7.—The inlet in the three postures—smallest in full-flexed dorsal. (Küttner.)

dorsal. Taking the sacrum as a fixed point, the symphysis

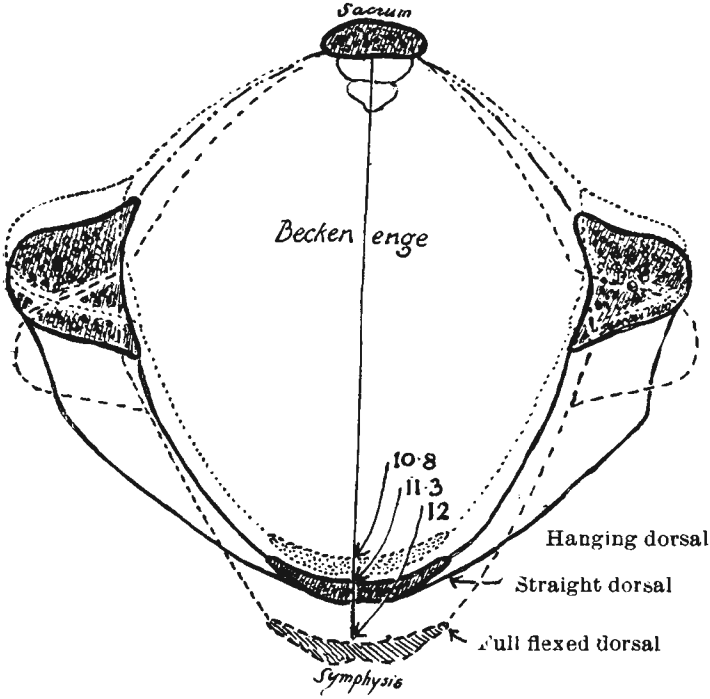

FIG. 8.—The outlet in the three postures—longest in the full-flexed dorsal. (Küttner.)

may be said to "wander" up or down, according to the position of the legs, as shown in the diagram, Fig. 6. Coincident

with this alteration in the relative location of the symphysis, rotation of the symphysis took place about a transverse axis passing through its middle portion. Thereby, as the symphysis rises, its upper edge approaches the promontory, whereas the lower border goes further and further away from the sacrum (Fig. 6). Conversely, if the legs hang down, the upper edge increases its distance from the promontory, while the lower border approaches the sacrum.

The most striking result of Von Küttner's casts is shown in Fig. 8. The alteration in shape of the plane of the outlet is

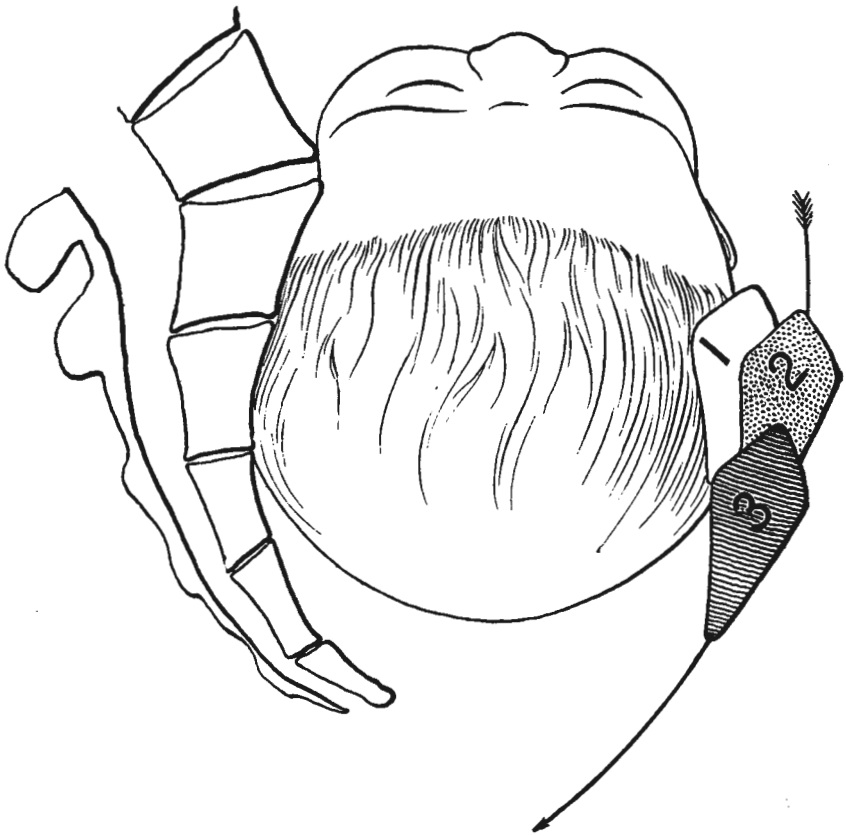

Fig. 9.—Pinard's idea of the effect of the Walcher posture. No room gained.

much greater than that of the inlet; and opposite in effect, so that in the full-flexed dorsal posture the antero-posterior diameter of the outlet is at its maximum, whereas in the hanging dorsal it is at its minimum. There is much more alteration obtainable through posture on the outlet diameter than in the inlet measure. Change from hanging to full-flexed dorsal lengthened the conjugate of the outlet 1.4, 1.8, and 2 centimetres respectively (Figs. 7 and 8), while the true conjugate was lengthened, by changing from full-flexed to hanging, 1, .9, and 1.4 centimetres, the pelves being named in like order. The transverse measurements are not affected.

Pinard[1] argues against the hanging dorsal posture, because he believes that it narrows the diameters between the mid-sacrum and the back of the symphysis, and also those of the outlet, as shown in the diagram. This seems to me fallacious.

Varnier[2] declares that symphyseotomy should replace all other methods of treating narrow pelves. The pelvis cannot be enlarged without section, and studies in mensuration on cadavers disprove the claims of Walcher. In 1894 Varnier had already discussed the *pro* and *con* of Walcher's position. Instead of its enlarging the true conjugate by one centimetre, experiments on the unpuerperal cadaver show that the true conjugate does not gain over 6 millimetres (due to the maximum play of the sacro-iliac synchondrosis), while in the puerperal pelvis the gain does not average over 5 millimetres. Pinard and Varnier have studied the question since 1894. They measured the pelves of nine women who died in the puerperal state. In one case the true conjugate was not enlarged at all; it was enlarged 1 millimetre in two cases; 1.5 millimetres in one case; 2 millimetres in one case; 3 millimetres in three cases; 4 millimetres in one case.

Ayers[3] discredits the hanging dorsal posture, as unlikely to give an increase in the antero-posterior diameter of appreciable practical value. He thinks, however, that as the symphysis is pulled downward opposite the sacral hollow, the posterior parietal eminence of the child's head is likely to enter the true pelvis first, while the anterior eminence is still over the symphysis, whereby advantage is taken of a practical increase in the passage.

The *practical deductions* from all these studies are evident:

1. Posture will notably alter the shape of the pelvis in late pregnancy.

2. Increase in available room in the pelvic cavity as a whole cannot be brought about.

3. To obtain the longest conjugate at the inlet the hanging dorsal posture is to be employed. The gain is nearly 1 centimetre.

4. To obtain the longest conjugate at the outlet the full-flexed dorsal posture is necessary. The increase promises to be from 1.5 to 2 centimetres.

[1] Annales de Gyn. et d'Obst., xvi., 1894, 428.

[2] "Rapport sur la Symphyséotomie," Internat. Med. Cong. Moscow; also Ann. de Gyn., tom. xlviii., 1897, p. 252.

[3] Obstetrics, April, 1899.

Trendelenburg's[1] paper of 1890 may be summarized as follows: Elevation of the pelvis was recommended by the old surgeons in connection with the taxis for hernia. The theory was that the weight of the mesentery, assisted by violent shaking, ought to set free the incarcerated loop of intestine.

Fabricius ab Aquapendente recommended that the patient be hung up by the hands and feet with pelvis higher than thorax, and that he should then be shaken violently. Corvillard practised complete inversion, hanging his patient by the feet. Sharp recommended that the patient be placed upon the back of an assistant with his legs hanging over the latter's shoulders, so that the knee-hollows rested upon them. He was also to be shaken. Ribes recommended a similar procedure.

In 1878 Freund placed a patient, who was to be operated on for carcinoma uteri, in such a position that the pelvis was higher than the head.

In 1880 Trendelenburg began to use the position which goes by his name. He was not influenced by Freund, but got his idea from Marion Sims, who, in his well-known position, made the vulva the highest part of the trunk. As Sims caused air to enter the vagina, Trendelenburg wished it to distend the bladder in fistula operations. Later it was found of value in suprapubic lithotomy (1884). In 1887 he began its use in laparatomy due to intrapelvic troubles.

De Leon used the position for the castration of women and for gynecological exploration (palpation of pelvic organs through abdominal walls).

In consulting Trendelenburg's references[2] we find that he did not take much pains to look up the history of his position, as his references and notes were taken bodily from Bardeleben's "Chirurgie," fourth edition, vol. iii., p. 775, section on hernia. These references are incomplete and often give no clue by which they can be looked up. The "similar procedure" of Ribes is as follows:

"Ribes places the patient at the foot of the bed in such manner that the knee-hollows rest over the shoulders of an assistant, who raises the pelvis and shakes the body of the

[1] "Ueber Blasenscheidenfisteloperationen und über Beckenhochlagerung bei Operationen in der Bauchhöhle." Volkmann's Sammlung, Chirurgie, No. 109, 1890.

[2] References given by Trendelenburg: Ribes, Bardeleben's "Lehrbuch der Chirurgie," 8th edition, iii., p. 792.

Freund, Samml. Klin. Vorträge, No. 133.

De Leon, Centralblatt f. Gynecol., 1888, No. 21.

patient while the operator makes taxis." No reference is appended to Ribes.

As for Sharp, there is no reference to him either. He is doubtless the renowned English surgeon (eighteenth century), but in looking through his Surgery I find it only stated that "the buttocks should be raised considerably above the head in making taxis."

OTHER POSTURES.

Palmer Dudley, in a discussion on my sheet sling,[1] expressed the opinion that the pelvic floor was subjected to increased tension from the full-flexed posture, while the head was escaping. If Fothergill is right, his argument applies to the arched dorsal as much as to the hanging posture.

Potter[2] presents a number of fine cuts tending to give clear ideas of the postures he describes. The full-flexed dorsal, but with the hands above the head, he calls the dorsal sacral position. The posture with partly flexed legs, yet with feet not on a table, he labels the dorsal recumbent. The ordinary posture for examination, the thighs and legs flexed and the feet on the table, the shoulders and head somewhat elevated, he calls the dorsal elevated. Hegar labels the latter the lithotomy posture, but Potter calls his dorsal sacral the lithotomy posture.

Howard Kelly, in examining the bladder, places two pillows under the sacrum of the patient lying in the fully-flexed dorsal posture. He calls this the "dorsal position with elevated pelvis."[3] We might abbreviate his name for the posture to accord with my previous suggestions and label it the "inclined flexed dorsal."

Brothers[4] emphasizes the value of posture in prolapse of the cord. The woman being placed in the genu-pectoral position, the body of the uterus tends to slip lower than the cervix, and the cord, owing to the same force of gravity, tends to slip down to the fundus and out of harm's way.

In 1894, in the Jenks prize essay on prolapse of the cord, the author expressed his opinion that the dorsal position with pelvis elevated would prove far superior to the genu-pectoral position, and added, "theoretically Trendelenburg's position ought to be followed by the same results."

He gives a history of two cases.

[1] N. Y. Med. Record, April 5, 1890.

[2] AMERICAN JOURNAL OF OBSTETRICS, 1892, vol. xxvi., p. 758.

[3] "Operative Gynecology," Appleton, November, 1898, vol. i., p. 279.

[4] "A New Postural Method of Treating Prolapsus of the Umbilical Cord." By A. Brothers. AMERICAN JOURNAL OF OBSTETRICS, 1895, p. 849.