COLEMAN, (J. S.)

CESAREAN SECTION,

NECESSITATED AND JUSTIFIED BY HYPERTROPHIC ELONGATION OF THE CERVIX; REMOVAL OF A LIVING FEMALE CHILD OF SEVEN POUNDS WEIGHT.

A PAPER PRESENTED TO THE COUNCIL BY A CANDIDATE ELECTED TO FELLOWSHIP OF THE AMERICAN GYNÆCOLOGICAL SOCIETY AT THE THIRTEENTH ANNUAL MEETING IN 1888.

BY

JNO. S. COLEMAN, M.D.,

Augusta, Georgia,

Fellow of the American Surgical Association.

[Reprinted from the AMERICAN JOURNAL OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN, Vol. XXI., November, 1888.]

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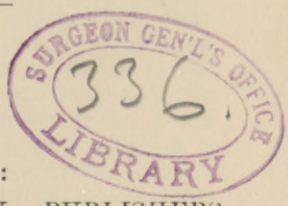

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OF SEVEN POUNDS WEIGHT.

Inasmuch as I believe that the following case stands alone in medical literature, I shall make no apology for detailing every circumstance connected with it.

On the 27th of February, 1886, I was requested by my friend, Dr. W. H. Foster, to see with him B—— A——, colored, primipara, 24 years of age, and about whose condition he was uncertain, but he believed her to be the subject of extra-uterine pregnancy.

She thought herself at the end of gestation, and, for three days past, had suffered pains which were only quieted by twenty-five-drop doses of tincture of opium. She had evidently suffered much, the entire abdomen was unusually distended, markedly so in the upper zone; and was highly nervous with a pulse of 140 beats. Upon making a vaginal examination, I found a partial procidentia consisting of the cervix, which protruded beyond the labia to the extent of two and a half to three inches, at least one and a half inches in diameter, with an os sufficiently patulous to admit of the easy introduction of the index finger. Vaginal examination disclosed a continous cervix of about the same diameter to the junction of the vagina and uterus. Deep rectal explorations revealed no more, though the tip of my finger recognized a rounding forwards of this body, which I took to be the fundus of the uterus. Abdominal palpation and auscultation determined the position of the fetus to be dorso-anterior and obliquely transverse from right hypochondrium to left lumbar. The head and shoulders were in the first-mentioned region; *placental souffle could not be detected anywhere;* abdominal distention was so great, the heart sounds so distinct (more so than I, in any case, can now recall) that I, too, was convinced that we had to deal with a case of extra-uterine fetation.

The sound was not used because I feared that muscular con-

tractions might be provoked in the abdominal walls, and the supposed sac thereby be ruptured.

The patient was seen and carefully examined the same afternoon by Drs. H. F. and A. S. Campbell in consultation. The next day, Sunday, Drs. Eugene Foster and A. H. Baker, together with my son Thomas D., were invited to be present.

After a most critical and careful examination, all the physicians agreed that it was an extra-uterine pregnancy, and from the history given by patient of herself, and the symptoms present, that she was at the full term of gestation.

The unanimous decision reached was that surgical interference was imperative, and that the sooner it was undertaken the better would be the prospects of both mother and child.

It was not until Wednesday morning that the consent of the patient and her friends could be obtained to the performance of the operation.

No preparatory treatment was instituted, because it was deemed important that the abdominal viscera should be kept in as quiescent a state as possible.

March 3d, patient's nervous perturbation has been very much quieted from the use of bromides and opiates.

At 3 P.M., assisted by the fore-named gentlemen and Dr. Jos. E. Allen, the patient was etherized, after having had administered to her hypodermically one-quarter grain of sulphate of morphia with one-ninety-sixth grain of sulphate of atropia.

I carefully dissected through the tissues in the linea alba below the umbilicus to the extent of about six inches, and upon a grooved director cautiously slit the peritoneum.

The tumor, when exposed, so much resembled the pregnant uterus that the incision was extended above the umbilicus. The increased space brought the appendages into view and at once demonstrated its true character.

To myself and all present this revelation was most unexpected, for my mind had not conceived the possibility of such a prolongation of uterine tissue from the epigastrium to three inches beyond the vaginal outlet.

The uterus having been lifted and drawn forwards, I quickly cut through its anterior wall and removed therefrom a vigorous female child of between seven and eight pounds weight. The hemorrhage, being no freer than in most ordinary cases of labor, was kept out of the abdominal cavity as much as possible by flannels wrung out of a hot disinfecting solution; the placenta was easily removed; the uterus firmly and promptly contracting, arrested all flow of blood. The abdominal cavity was cleansed of all blood and amniotic liquor. I was unwilling to trust to the continuance of muscular contraction, and, therefore, used deep and superficial carbolized catgut sutures. The peritoneum was closed with a continuous suture of fine carbolized catgut; the abdominal walls, by harelip pins, and superficial sutures of carbolized silk; four or five rubber adhesive strips were applied as an

additional support, a large compress of absorbent cotton was placed over the line of incision, and a broad flannel bandage completed the dressing.

One of the gentlemen present suggested that I should make a "Porro." To this I could not assent, with my views as to the pathology of this complication of pregnancy. In my opinion it is the result of the stimulation by the fertilized ovum, and, therefore, after the uterus has been emptied of its contents, the involution would reduce the cervix to its normal size, as is usual after ordinary labor. I think that the very great reduction in size which occurred during the one hundred and eight hours that my patient survived the operation fully sustains me in this opinion. To have performed a "Porro" would not only have unsexed the woman, but would have added materially to the risks of the operation, and have lessened her chances for recovery, *i. e.*, the unavoidable hemorrhage from such tissues.

Another puncture of morphine and atropia was now administered and the patient placed in a comfortable bed,[1] and directed to have one-quarter grain morphine and five grains quinine administered every four hours, the morphine to be repeated as often as necessary to quiet pains.

9:30 P.M. Patient has rested quietly, reaction complete; to be allowed nothing but cracked ice.

March 4th. Seen at 7 and 9 o'clock A.M. by the Drs. Foster. At 1 P.M. was visited by Drs. Campbell, W. H. Foster, and myself; has passed urine copiously, no marked tympanites or tenderness; temperature 101.6°, respiration 34, pulse 150; equal parts of barley water and milk in small quantities permitted.

March 5th. Patient visited by Dr. W. H. Foster, has had a comfortable night, sleeping almost continually, complains of slight pain in right lumbar region. Pulse 150, temperature 101.5°, respiration 36. Voided urine freely, takes with relish the barley water and milk, and craves solid food.

1 P.M. Condition about the same as this morning, with the exception of a slower pulse by five beats. One-quarter grain morphine taken at 9:30 last evening, and at 5 and 11 this morning.

3 P.M. Took three ounces beef-tea at 4, 8, and 9 o'clock. Complains more of pains in lumbar region, tenderness somewhat increased; temperature 102.4°, pulse 145 and of good volume, respiration 30, considerable borborygmi, rectal tube introduced and allowed to remain temporarily, gas freely escaping through it.

March 6th, 9 A.M. Retained rectal tube until 4 A.M., gas escaping more or less constantly through the night; pulse 140, temperature 101°, respiration 30. Craves solid food and wishes to know when she will be allowed to sit up. Tympanitic disten-

[1] Hands, instruments, and sponges were disinfected with solutions of corrosive sublimate 1–8,000, and carbolic acid 1–500.

tion much less, does not complain of pains, and bears well moderate pressure.

4 P.M. Has rested well since morning visit; temperature 102.6°, pulse 130, respiration 30. Has had a semi-solid movement with escape of a good deal of flatus; takes beef-tea, barley water and milk with relish; no thirst. Infant thrives upon one part of cow's milk to two of barley water sweetened with loaf sugar. This morning succeeded in getting a woman to come and nurse the child three times daily.

10:30 P.M. Three copious movements from bowels since four o'clock. Took one-quarter grain morphine at 12, 4, 7, and 10 o'clock, and doses to be continued hourly until sleep be induced.

March 7th. Six doses were necessary before sleep was induced. There has been no lochial discharge, but upon two or three occasions the napkin was slightly stained. Diarrhea checked. Temperature 102°, pulse 150, respiration 30. No increased tenderness, facial expression good, and patient reports that she does not suffer.

1 P.M. Evident change for the worse; temperature 103.4°, pulse 160, respiration 24. Allowed to have an occasional egg-nog added to the dietary. Skin acting freely; marked jactitation; intellect clear.

10 P.M. Has rapidly failed since visit at noon. Pulse 165, and almost imperceptible. Has not slept, though morphine has been repeated hourly. Nausea, with constant spitting of mouthfuls of watery fluid. Died at 2 A.M. on the 8th of *acute septicemia, having survived the operation one hundred and eight hours.*

Sectio Cadaveris.—With the greatest difficulty was consent to a partial and hurried autopsy obtained.

Because of a cut and several abrasions upon my hands, Dr. Eugene Foster, with the assistance of Drs. A. H. Baker and W. H. Foster, kindly made the examination for me.

Abdomen much distended, and absorbent cotton unstained, except with perhaps ʒ i. blood at lower portion of wound.

When adhesive strips were removed, union of skin was apparently perfect.

Some show of pus around points of entrance and exit of pins. Edges of wound separated so easily after removal of pins and sutures that it is hardly probable that any material union had taken place.

No decided injection of vessels of either parietal or visceral peritoneum. Two moderate sized blood-clots were found lying upon the intestines, and cavity contained about a quart of bloody serum.

Lateral incisions in the abdominal walls were made to facilitate the removal of uterus and appendages. Uterus *lessened in size about one-half*, and incision ununited and gaping. The organ measured from fundus to os externum *twelve inches*. The incision in uterus had contracted to about three inches; this was

now extended to the internal os, and cervix carefully measured; this was found to measure *six and one-half inches*, and readily permitted of the passage through it of a No. 16 gum elastic English bougie.

Neither Madam Boivin, Hodge, Meigs, Ramsbotham, Tyler Smith, Churchill, Meadows, Playfair, nor Lusk mentions *hypertrophic elongation of the cervix* as a cause of dystocia.

I notice that in enumerating the obstacles to delivery presented by the uterus, Cazeaux, p. 625, alludes to the subject in the following few lines: "Induration with hypertrophy of the cervix uteri very often retards the dilatation, and sometimes even renders it impossible."

All gynecologists mention hypertrophy and elongation of the cervix, but Schroeder, Barnes, and Goodell treat the subject more exhaustively than any authors with whose writings I am familiar. In the London edition of 1873 of his "Diseases of Women," Barnes graphically portrays, upon p. 633 and in Fig. 115, this supra-vaginal hypertrophic elongation.

As regards the etiology of this disease, I quote Schroeder, p. 76: "The causes of general peniform hypertrophy of the infra-vaginal portion are entirely unknown. Parturition cannot be especially blamed for it, because the most typical cases have occurred in nulliparæ." On p. 81: "Although in certain individual instances this supra-vaginal hypertrophy arises from unknown causes similar to those underlying infra-vaginal enlargement, still, in a large number of cases, this condition must be regarded as a consequence of a primary prolapse of the vagina, an etiological fact already pointed out by Cruveilhier, and recently alluded to by Spiegelberg. It will be readily understood that the prolapsing vagina exerts general omnilateral traction of the cervix. . . .S h ould the uterus, however, be retained in its position by normal or pathological supports,[1] and thus be unable to follow the traction of the vagina, a drawing out of the cervix in a downward direction easily occurs, usually not merely a simple elongation with attenuation, but through the irritation, an *increase in bulk of the whole cervix.*" On page 87, we find: "The median portion of the cervix is the chief seat of the hypertrophy; the symptoms will differ from those already described, because this part is supra-vaginal at the

[1] *I. e.*, by the physiological development of the body in my case, and by the large fibroid, a diagram of which will be found in Fig. 41, p. 91.

anterior and infra-vaginal at the posterior lip. These cases are more common in my experience than the two other varieties, although, with the exception of a case by Graily Hewitt (represented in diagram, but not described in text), I do not find this form of cervical hypertrophy mentioned in the literature of the subject."

Goodell in "Lessons in Gynecology," page 153, gives us the fourth theory of its causation, that advocated by I. E. Taylor; "that contrary to the commonly accepted belief, the glandular portion of the cervix during gestation is not effaced, but hypertrophied, and that even after labor it still exists; for it has undergone nothing more than a momentary expansion of its canal for the passage of the fetus; that, consequently, if the natural process of involution does not take place, the gravity of this hypertrophied cervix will aid and sustain the elongation of the non-glandular part of the supra-vaginal cervix, viz., the isthmus which is thick, soft, and ductile in the non-involuted womb." Further on, page 155, "Granting then these premises, I think we are logically forced to admit in the non-involuted uterus not only the ductility of its isthmus and corpus, but also the gravity of its hypertrophied cervix. I shall, therefore, invite you to accept Dr. Taylor's theory; not, however, as one covering the whole causation of this affection, but as one throwing additional light upon it." On page 156: "Thus, when adherent to the wall of a growing cyst, it has been found stretched out to a length of six or more inches. I have seen the same thing happen to a *womb firmly bound to a cyst of ventral fetation.*"[1]

We must now consider the question of *diagnosis*. Confessedly difficult in the early months, some cases of abdominal pregnancy at full term cannot be definitely diagnosticated until post-mortem section reveals the truth. Vide Transactions of the American Gynecological Society for 1879, page 322. In the discussion of Dr. J. C. Reeves' case of extra-uterine pregnancy, Dr. Mundé, of New York, remarked: "My experience in extra-uterine pregnancy extends to only three cases. I saw my first case in Wurzburg in 1869, whilst I was with Prof. Scanzoni, and I refer to it to show that *he, with his great expe-*

[1] This same upward and downward traction was exerted in my case by the developing body and fundus above, antagonized by the infra-vaginal hypertrophied cervix.

dience, was not able to make a diagnosis of the extra-uterine pregnancy until a post-mortem was reached. The child was full grown (italics mine). I believe, however, with Dr. White that it is not possible to make a positive diagnosis except when we hear the fetal heart. Perhaps I should not say impossible, for I think it may be possible but to say the least, diagnosis without these signs is questionable."

In the AMERICAN JOURNAL OF OBSTETRICS for 1879, page 31, Prof. Byford has an interesting and instructive paper upon "A Case of Double Operation of Ovariotomy and Hysterotomy," in which are forcibly illustrated, not only the difficulties of differential diagnosis in this class of cases, but also the mistakes of eminent and skilful specialists. I quote as follows: "Preparations were at once perfected; the patient etherized, placed upon the table, and an incision about three inches long in the linea alba exposed the sac. After assuring myself that there were no adhesions on the anterior surface, I introduced Spencer Wells' trocar, and drew off about twelve quarts of amber-colored fluid. The fluid was thin but somewhat viscid, presenting the appearance I had often witnessed in ovarian tumors. When the sac was nearly emptied, I noticed a tumor behind it, adhering to the sac and preventing it from passing out through the incision. The second tumor was elastic, and so perfectly resembled a secondary cyst that I had no hesitation in plunging in a trocar through its walls, with a view still further to lessen the bulk of the entire mass by evacuating its contents. As the trocar met with unusual resistance, and nothing but blood passed through it, I became convinced that there was something unusual about it. The incision was somewhat enlarged, and as much of the emptied sac drawn out as would pass, when it was discovered that slight adhesions, and not continuity of tissue, connected the two. After the cyst was entirely withdrawn, I was astonished to find that the second tumor was the impregnated uterus, and still worse, that it was wounded and bleeding. This revelation was accepted with many doubts by the physicians present, who were friends and neighbors of the patient, and believed it impossible that she should be pregnant. The facts, however, were so patent as to overcome their incredulity. At that moment I did not call to mind an almost precisely similar instance that had occurred to Mr. Wells, and could not recall a precedent for my guidance.

The wound in the uterus had been very much enlarged by the contraction of the transverse, oblique, and longitudinal fibres of that organ, until, in the few moments that had elapsed since the puncture, it had become as large as a silver dollar. It seemed to me, in the short time I had for reflection, that the only way out of the difficulty was to evacuate the uterus. This was done by making an incision about four inches long from near the fundus downwards, so as to include the accidental aperture. The incision exposed the placenta at about the middle of its attachment. This organ was easily and rapidly separated by passing the index-finger between it and the uterine walls, and completely removed. After this was done, the right side of the fetus, the arm, hip, and feet were perfectly exposed. The breech was seized and drawn towards the opening, when the fetus was expelled by uterine contraction. The membranes and liquor amnii were next removed, when the uterus was perfectly devoid of all its former contents. . . . Under ordinary circumstances, the diagnosis of this complication is not very difficult, as the uterus lies anterior to or on opposide of the tumor, so that its presence and contents are easily ascertained, but exceptional cases are sometimes found when the difficulties are sufficient to mislead an experienced and accomplished observer.

"Mr. Wells acknowledges mistakes in his own practice, and mentions the fact that Dr. J. Marion Sims fell into an error of diagnosis and did not discover the complication until the gravid uterus was exposed, during the operation for the extirpation of the ovarian tumor. A considerable number of other cases might be cited in which mistakes of this kind have occurred. . . . Mr. Wells publishes a case, alluded to above, in his well known 'Diseases of the Ovaries,' almost exactly like the one I have recorded. . . . He (Mr. Wells) had entirely overlooked the existence of pregnancy with ovarian disease, and after removing an adherent multilocular cyst of the left ovary, he felt what he thought to be a cyst of the right ovary, tapped it, and then found that it was the gravid uterus. From this puncture two or three pints of bloody fluid escaped through the canula, when the tumor became much less tense; and he says, on raising the tumor up, he saw the Fallopian tube passing from its upper part, and thus he knew at once he had punctured the uterus." . . . Dr. Byford acknowledges his indebted-

ness to Dr. Mundé for the histories of the four other cases. On p. 38, he says: "Mr. Wells says with reference to the question, 'What should be done when a pregnant uterus is discovered during some stage of ovariotomy? Let it alone.' But supposing the operator has penetrated the uterus or wounded it? If any conclusion can be drawn from the case in which I made this mistake and emptied the uterus, and two other cases in which the same mistake was made by other surgeons who did not empty the uterus, but closed the puncture in its walls by wire sutures and both patients died after aborting, while mine recovered, it would seem to be the safer practice to empty the uterus."

Dr. Robert P. Harris, of Philadelphia, kindly refers me to the case of Dr. Evory Kennedy (*Dublin Journal Medical Science*, Vol. XIV., 1839, p. 319) who found his patient the exact counterpart of what I, before abdominal section, conceived to be the condition of affairs in my patient, viz., an hypertrophied elongated uterus forced down, and partially without the vulva, by the superincumbent gestation sac. He also calls my attention to the cases mentioned by Barnes in his "Obstetric Medicine and Surgery."

In the *Medical Record* for January 31st, 1880, in a lecture upon the subject Dr. Goodell stated: "Some years ago a distinguished physician was attending a lady in West Philadelphia for what he supposed to be an attack of pelvic cellulitis. . . . I was called in consultation. I diagnosed the case to be one of pelvic peritonitis. Two months more passed by, when the late Dr. Parry, who had also been called in, came to me and said jokingly, 'Doctor, you have made a bad blunder, the trouble is merely normal pregnancy.' Nevertheless I knew that there was something abnormal in the case. I again visited the patient, and I had barely begun my examination when suddenly it flashed upon me, what I have here is a case of extra-uterine fetation. . . . Here was an instance where three separate physicians were each and all of them deceived."

Dr. G. decided it to be a case of extra-uterine fetation, and determined to use Paquelin's thermo-cautère. Fortunately the operation was deferred, and the woman was delivered per vias naturales of a small living child. This case proved to be uterus bicornis with pregnancy of one horn.

Dr. Garrigues, in the Gynecological Transactions for 1882,

p. 206, in his paper on "Electricity in Extra-uterine Pregnancy," writes as to diagnosis: "I am far from underrating the difficulties surrounding the diagnosis of extra-uterine pregnancy; there can be no better proof in this respect than the hesitation or mistakes of some of the most experienced gynecologists of all countries in their dealings with this sad condition."

Dr. Thomas, in his twenty-one cases of extra-uterine pregnancy in the Gynecological Transactions for 1882, p. 226, says: "In spite of this gratifying advance, however, our knowledge of the subject is even now elementary, our means of diagnosis still uncertain, and our methods of treatment unsettled." In the same Transactions for the year 1881, in Dr. Brown's paper upon intra- and extra-uterine pregnancy, the following paragraph occurs: "On examination per vaginam, the canal was found much elongated, its rugæ obliterated with the exception of an irregular annular fold of the membrane in the ordinary situation of the vaginal cul-de-sac, and the os uteri drawn up so far as to be entirely out of reach." Dr. Brown also quotes the case of Dr. E. Paul Sale, which bears a strong resemblance to my own, in that laparotomy and Cesarean section were done, living children removed, the mother dying ninety-three hours afterwards of "supposed septicemia."

In Dr. J. Marion Sims' "Uterine Surgery," p. 200, I find the following language as to the dependence of sterility upon elongation of the cervix: "But, independently of its mere form, if the cervix projects into the vagina a full half-inch, it is very likely to be associated with the sterile state; if an inch, the case is almost necessarily sterile; if it should be still more elongated, say one and a half or two inches, it becomes absolutely so; and if it does not project into the vagina at all, it is equally sterile."

Dr. Robt. Barnes, "Diseases of Women," p. 437, in treating of the diagnosis of abdominal gestation from ovarian tumor and normal gestation: "The recognition of freely fluctuating ovarian tumors is easy; but I have several times experienced great difficulty when the tumor was, in great part, solid. Ovarian tumors are occasionally irregular in shape, and present hard projections, which, if the mind is occupied with the idea of pregnancy, are readily mistaken for the fetal limbs. *After the utmost pains have been expended, in order to arrive at a conclusion, an exploratory incision may offer the only satisfactory*

information as to the diagnosis of one form of extra-uterine gestation from another (italics mine).

"Scanzoni declares that this is impossible during life. This must be taken with some qualification. The abdominal form, at least, may commonly be distinguished from the tubal by its greater development, by its longer history, and by its terminations. The abdomen is generally less tense than in normal gestation, it is expanded transversely; the umbilicus is often strongly drawn in. The fetal movements may be felt very distinctly, and are often more violent than in ordinary gestation. *The placental souffle is very rarely heard.* The os uteri may feel like that of the pregnant uterus, the cervix being open. . . . *In almost all these cases, the uterus is elongated*" (italics mine).

I have deferred until the last quotations from Mr. Lawson Tait ("Diseases of Women," Wood's library), and Prof. A. R. Simpson, of Edinburgh, because they, of all authorities consulted, mention, as a complication of pregnancy, hypertrophic elongation.

They refer to the only cases *at all parallel to my own;* but Mr. Tait's case was incomplete in that it was still under observation at the time his book was written. Vide p. 57: "I have *now* under my care, in association withmy friend, Mr. H Langley Browne, of West Bromwich, a very pronounced case of this malformation where pregnancy has followed dilatation without amputation, and *the condition is now very remarkable.* The cervix feels like a protruded uterus, with which the sudden swelling of the pregnant fundus appears to have no connection until very careful examination is made." On p. 110 he says: "But suppose the child is still undeveloped in a sac of some kind, and alive, how can we determine that it is not in the uterus? I confess that, short of introducing the sound or the finger into the cavity, I know of no means of certain diagnosis."[1] "In fact, unless this patient had been under my care previous to her becoming pregnant, the diagnosis would have been very difficult. *In one case of this hypertrophic elongation of the cervix, I had to amputate nearly two inches in order to reach the polypus. The elongated cervix would not dilate by sponge sufficiently to allow me to manipulate*" (italics mine).

[1] After most careful, painstaking examination, such a connection could not be made out in my case.

On p. 112, Mr. T., in discussing the diagnosis of extra-uterine pregnancy, says: "*The most important point is that the cervix is always quite open, in my cases almost admitting the finger. Under such circumstances, if a fetal heart is audible, the case is clear*" (italics mine).

I am greatly indebted to Dr. Eugene Foster, not only for valuable assistance in the investigation of the literature of this subject, but for his kindly obtaining for me the loan from the Surgeon-General's office, U. S. Army, of the Edinburgh Obstetrical Society's Trans. for 1882 and 1883. In this volume is contained Prof. A. R. Simpson's paper, "Basilysis for Dystocia from Hypertrophic Elongation of the Cervix Uteri." This patient was seen by Prof. Simpson two hours after her admission into the hospital and some twelve hours after the commencement of labor. Page 34, par. 2: "On inspection, a tumor was noticed projecting two inches from the vulva, with a transverse division in the centre; its consistence was very hard, and it was of a red color, except in some places where it was ulcerated and covered by a gray pellicle, showing that the erosion had existed for some time, and from these there was a discharge of sanguineous, purulent matter. The vulva was distended by the tumor, the parts around being white and indurated. *The os just admitted two fingers, and at a full finger's length from the os the vertex of the child was felt presenting with the membranes unruptured;* the occiput was directed to the right and a little posterior to the right extremity of the transverse diameter (italics mine). The bones of the head felt lax."

The cervix was pushed back into the vagina and the anterior lip supported during the pains. Its tissue became somewhat softer, and the os dilated to about two inches in diameter and the lips would be about half an inch thick. During this time, the upper portion of the cervix and lower part of the uterus were becoming thinned out and in danger of rupture. On Prof. Simpson again returning, the membranes were ruptured and meconium stained liquour escaped, after which the parts were thoroughly douched with carbolized water. It being very clear that the child was dead, he determined to basilyze it so as to facilitate the delivery. The patient was anesthetized and placed in the lithotomy position, in the presence of Dr. Guido Jochner, Jr., of Munich, Dr. Anderson, of University College, London, and several of the maternity students. The house

surgeon kept the uterus fixed by pressure above the pubes. The vault having been perforated on the side next the anterior wall of the cervix, the point of the basilyst was guided to the anterior part of the base, in front of the sella turcica, and screwed in to the shoulder. When the blades had been separated, it was felt that the structures were broken up. To effect more minute comminution, the instrument was again applied just behind the sella turcica, and on its withdrawal the base of the skull felt relaxed. No blood escaped during the proceeding, showing that the child was dead, and the maternal structures were not injured. Some brain matter escaped during the operation, and the rest was evacuated by douching. Traction on the head was made by the fingers, support and counter pressure being applied to the lips of the cervix during its extraction. The head was delivered easily, but difficulty was experienced with the shoulders, the circle of the os fissuring in different directions, especially at the left side, where the parts were somewhat thin. The distention by the shoulders also wounding the left nympha and adjacent portion of the vestibule anteriorly and right posteriorly. . . . In his remarks upon this case, Dr. Simpson gives the history of a case by Benicke, in which, as in his own, the presenting head was within reach of the finger. In this instance, bilateral incision nearly two inches (5 cm.) were made and delivery with forceps effected. He also mentions another by Benicke, very similar to the one narrated by himself, also the case of Dr. Shelton, read before the New York Academy of Medicine by Dr. A. K. Gardner, April, 1862.

I shall now take up the question of treatment, and endeavor to close with as few words and quotations as will suffice to indicate the proper course to be adopted ; as to that of the early months, there is a general consensus of opinion as to the propriety of destroying the embryo ; and of all the means employed, electricity has, of late years, given, beyond all question, the best results.

In the discussion of Dr. Reeve's case (Trans. Gynecological Society, 1879, p. 329), the clarion notes of Dr. T. G. Thomas trumpet forth no uncertain sound : " In abdominal cases, however, when the fact is fully recognized, when there is a non-pregnant uterus, and a living child in the abdominal cavity, the practitioner knowing that if that child is left there it will

surely die, he who refuses to *cut open the abdomen and remove it should be tried before a court of justice* (italics mine). It is the bounden duty of the surgeon to remove the child under such circumstances."

The above remarks, though predicated upon abdominal gestation, apply, in my opinion, with equal force to a uterus at full term with *exaggerated hypertrophic elongation of the cervix*, as in my case.

Among the cases cited by Dr. B. B. Browne is that of Dr. H. P. C. Wilson, who states that at the autopsy ninety hours after operation: "The uterus was reduced to about one-half the size it was at the time of the operation." In so far as memory's comparison could determine, this was certainly so in my case, in which the autopsy was held one hundred and nineteen hours after operation. What must have been its dimensions previous to the operation? At autopsy they were, from fundus to os, twelve inches; hypertrophic elongation of cervix, *i. e.*, from internal to external os, *six and one-half inches.*

Mr. Tait is emphatic in his advocacy of the primary operation, for on p. 113 he says: "After the diagnosis of a case of extra-uterine pregnancy has been satisfactorily determined, the question arises, What is to be done with it? If the child is still alive and near the full term, I believe it our duty to operate."

Dr. Barnes, whilst coinciding with Mr. Hutchinson as to the propriety of a Fabian policy, asks the following pertinent question: "Are the dangers of the primary operation greater than those of the secondary operation, plus the dangers immediately and soon following the neglect to perform the primary operation?" And adds, p. 442: "Very eminent men have advised the primary operation. Thus Levret, Gardien, Velpeau, and Kiwisch urged it . . . Koeberlé . . . pronounces himself decidedly in favor of the proceeding. Dr. Keller . . . after carefully weighing the arguments for and against, decides in favor."

After patient, laborious research of all obtainable pertinent literature, I reiterate a part of my opening: "My case stands alone in medical literature."

The cases reported by Dr. Simpson more closely resemble my own; but they even fall short of it in the degree of hyper-

trophic elongation. In two of the cases the index finger could reach and differentiate the presenting part of the child.

Now with a cervix protruding two and one-half to three inches beyond the labia, I passed my index finger, three and one half inches long, its full length, over the post-vaginal wall before I reached the utero-vaginal junction, and this without apparently diminishing the length of the protruded part. Several authors consulted say that in this form of hypertrophic elongation, the supra- far exceeds in length the infra-vaginal cervix. This fact is demonstrated by Barnes, "Diseases of Women," Fig. 115, p. 633, and verified by myself at the autopsy one hundred and nineteen hours after the operation. The supra- was about double the infra-vaginal portion.

Granting this estimate, to my mind the dilatation sufficient for the passage of a full-term child through a cervix of at least nine inches was a physical impossibility, because, first, of the great length of the hypertrophied cervix, and, secondly, because of the inexpansibility of the connective tissue, of which almost the entire structure consists in this class of cases. This fact is demonstrated in one of Mr. Tait's cases of elongated cervix, where, to remove a uterine polypus, after failing to dilate with sponge tents, he was obliged first to amputate two inches of the elongated cervix.