Case of Extra-Uterine Fœtation. By Wm. Denny, M. D., of Ellicott's Mills, Howard District, Anne Arundel county, Md.

In the middle of September, 1840, the subject of the following case, then æt. twenty years, was delivered of a healthy male child, at full time, after a natural labour. Her getting-up was unsatisfactory and protracted; and becoming myself shortly after confined to my house by serious indisposition for several months, she passed into the care of another practitioner. In the course of the winter, it was reported to me that she was considered to be threatened with prolapsus uteri.

Four or five years after, having in the meantime regained an appearance of

high health and very considerable embonpoint, she became liable to paroxysms of abdominal pain, with distension of the colon and torpidity of the bowels; which attacks I was enabled to relieve from time to time by means of anodynes and mild but efficient purgatives. A year or two later, she occasionally took opiates of her own accord, upon the accession of the paroxysms, sometimes in injudicious doses, as by the time I could reach her, she presented symptoms traceable to the opiate itself.

In the summer of 1848, as I learned afterwards, she had some anomalous symptoms, believed at first to be attributable to a suspension of the catamenia, previously regular. Passing some time in Baltimore, she was leeched upon the os uteri several times, when, at length, it became the opinion of her medical adviser there, as well as herself, that conception had taken place. I saw her for the first time under these circumstances, on the 28th of October, 1848, when some of the preceding facts were communicated to me. She also stated that she had not menstruated since the month of April, had quickened about two weeks before my visit, and was now about the end of the fifth month of utero-gestation. The enlargement of her abdomen seemed to corroborate the fact of the pregnancy, as well as the stage to which it was said to have advanced.

From that period until the last of the succeeding January, she was more or less constantly sensible of movements within her. She described her sensations as identical with those experienced in the last half of her former pregnancy, and was confident they arose from fœtal motion. Upon one occasion, she called my attention to these movements, and laying my hand upon her abdomen, over her dress, I felt the shock of fœtal turbulence so unequivocally that, although I had abundant opportunities afterwards, I felt indifferent to repeat the examination.

At another time, I applied the stethoscope, also over her dress, failed to recognize the pulsations of the fœtal heart, but heard what I considered to be the bruit de soufflet, clearly pronounced, abruptly terminating at a defined line upon the abdomen.

From the time I first saw her till the last of January, 1849, her abdomen enlarged at the rate, and with the characters, of normal pregnancy. When the movements spoken of were no longer felt, the growth of the abdomen came to a stand. A sensation of "rolling" motion succeeded, particularly upon her turning from side to side in bed. "Her breasts had been full of milk all winter," but soon after, the lactation receded.

In November and during the two succeeding months, the paroxysms of abdominal pain returned. They were relieved by anodynes, laxatives, and external relaxants. About the middle of November, being desirous of ascertaining whether there were present any threats of premature delivery, I proposed an examination per vaginam. This was readily assented to, with the emphatic declaration, however, that "these pains are in the bowels, and not in the womb."

Bounding the upper part of the vagina, my finger encountered a segment of a globular tumour, whose shape, taken in connection with that which could easily be made out, through the abdominal walls, proved it to be larger in diameter than the brim of the pelvis. It rested upon the brim, and although pressed down by a persistent force, was not impacted therein. It only so far protruded through the brim as its spheroidal figure differed from a plane. I could perceive no alternating impulse like parturient effort. I fancied I could feel, through some thickness of interjacent tissue, the form and firmness of a fœtal head; but so indistinctly then, and so much more so at subsequent

examinations, that I could lay no stress upon the sensation. But the os tincæ was not in situ. Extending my exploration upwards and backwards, the finger became embarrassed, not by any portion of the tumour, but by an advance of the posterior wall of the vagina, in a curve from the pubic aspect of the rectum, towards the centre of the strait of a large radius, in place of the cul-de-sac found there ordinarily. Certain that no os uteri existed, centrally, laterally, or posteriorly, I was about to extend my search to the point where alone it might be found, viz., high and close behind the ossa pubis, but was obliged to desist, then as well as afterwards, in consequence of tenderness to the touch complained of in that quarter.

No further incident is now recollected till the 30th of March. She then stated to me that, having had a discharge of bloody mucus for some twenty-four or thirty-six hours, pains had come on, differing from those from which she had so frequently suffered, that these were alternated with intervals of quiescence; she believed them to be uterine and not intestinal, and she was confident that her labour was at hand; nevertheless, as her pains were as yet slight, I might retire to another apartment for the present till I should be wanted. At daylight in the morning I returned, of my own accord, to her chamber, when her attendants reported that there had been no exacerbation of the pains through the night, that they had worn off about two hours before, since which time she had been quietly asleep.

On the first of May, she removed to Baltimore, where I visited her in company with her medical attendant there, on the 19th of June. She looked thin and leucophlegmatic, but her general health was said to be unimpaired. She informed me that about a week before my visit, there had occurred a sanguineous discharge from the vagina, lasting three or four days, ceasing without active interference, producing but little debility, and no sympathetic inconvenience. My friend Dr. —— told me that he had succeeded in finding the os uteri, high behind the symphysis pubis, and had also heard the placental souffle through the stethoscope.

I saw her again upon the 16th of August, much altered for the worse. She was much more emaciated, and I found her in bed. Within ten days preceding, another flow from the vagina had come on, longer continued and more profuse than before, weakening her materially, and giving rise to constitutional disturbance.* Her abdominal pains had recurred, for which she had to resort to large and frequently repeated doses of morphia. On the day before my visit, she had been affected with hysterical delirium, whether from the morphia or not, I was unable to determine. Both the flow from the vagina and the aberration of mind had now, however, ceased. I made another examination into the interior of the pelvis, laying my other hand upon the bare abdomen.

The organs therein were in statu quo. I succeeded in reaching the os uteri, situated between the tumour and the pubes. It presented, not the rounded, dimple-like opening of the gravid uterus at term, but a transverse slit, like the mouth of the undeveloped womb, flattened by the compression to which it was subjected. A sudden impulse impressed upon the presentation through the strait was clearly communicated to the other hand, on the surface of the abdomen. There was some irregularity in the resistance of the tumour through the abdominal walls, but the shape of the body and limbs of a fœtus could not be made out.

* The interval between these two occurrences of discharge was nearly eight weeks, *i. e.*, two catamenial periods. I believed them to be truly menstrual, and subsequently ascertained that such was the opinion of the patient, without, as far as I know, any such suggestion having been made to her.

In the meantime, she was desirous of obtaining further counsel upon her case. Accordingly, on the 14th of July, 1849, I furnished her with a letter, giving an outline history of what had passed under my observation, and expressing the opinion I had formed during the preceding winter, that the lady was the subject of extra-uterine fœtation. I had confidently communicated that opinion to more than one medical friend as far back as the first of February.

In a reply, dated July 21st, it was stated "that no positive conclusions can be arrived at beyond this, viz., that the tumour which distends the abdomen is the womb; that no physical signs of pregnancy can be detected; that the history of the case" (partly given by myself and partly derived from another source) "leads to the inference, that the womb is occupied with a mass of material, consisting of altered tubular or deciduous coat of the organ." This inference was confessedly conjectural, as the case was considered very obscure.

This view of the matter placed me under exceeding embarrassment. I gave the communication the attentive and respectful consideration due to the distinguished source from which it emanated; I took a resurvey of the circumstances of the case, with all the caution and non-committal I could command, and found myself unable to discover any difficulties in its diagnosis, and more strongly convinced of my first formed opinion.

Mrs. ——— returned to reside in my neighbourhood, and came again under my charge. Her general health seemed so much deteriorated that I had now no doubt that new light would ere long be thrown upon the supposed obscurity of the case.

Though, perhaps, somewhat irregular, I will here transcribe the reasons which would not allow me to abandon my conclusions as to the character of the case.

We have in it, suspension of the menses after April, 1848; quickening in October; fœtal motion, relied on by the patient, and clearly recognized by myself; the placental bruit; the normal growth of the abdomen, for three or four months; arrest of that growth concomitantly with the cessation of motion; lactation; and, finally, a simulated or pseudo-labour.

These circumstances are incomplete as the history of pregnancy, in that, 1st. I failed to hear the fœtal circulation; 2d. I did not elicit fluctuation of the amniotic fluid, or the ballottement of the fœtus; 3d. The bruit de soufflet is not established to be placental; 4th. Females and accoucheurs have both been mistaken by abdominal movements, in pronouncing upon the existence of pregnancy and a living fœtus; 5th. At the middle of July, 1849, no physical signs of pregnancy could be detected, by gentlemen pre-eminent for obstetrical experience, save only the mere enlargement of the abdomen.

1st. In order to detect the pulsations of the fœtal heart, the distal end of the stethoscope should be approximated to the thorax of the fœtus, with solid tissues only intervening. The tic tac is said to be a feeble sound, resembling the ticking of a watch heard through one's pillow at night.* The ear of the auscultator should be acute and well trained,† and the instrument ought to rest upon the bare abdomen.‡

Now there are certain cases in which the face of the fœtus looks towards the pubis. In such, its chest and abdomen present their front to that space on the body of the mother where alone we can avail ourselves of the means

* Velpeau, see Signs of Pregnancy, Cyc. Pract. Med.
† Evory Kennedy, see Colombat de l'Isère, Meigs' edition, p. 570.
‡ Dr. Walker's edition of Denman's Midwifery.

of exploration. Its limbs being gathered up in front, their interstices filled with the liquor amnii, must prevent the contact we need for success.

In other positions, though the thorax of the fœtus will be in contact with the abdominal walls of the female at one moment, yet floating freely amidst the fluid of the amnion, it may frequently change its position, as far as that contact is concerned. Much assiduity is, therefore, required, to catch the favorable time and place for the recognition of this sign. If the bruit de cœur be once made out, then there exists pregnancy, and a living fœtus; but, from the fact that stethoscopic sounds are occasionally inaudible, even in the case of a living and healthy fœtus, it does not justify a negative opinion.* I consider myself no proficient as an auscultator in thoracic affections. I had never used the stethoscope obstetrically before. I applied the instrument over the patient's dress, and probably with but little industry in the exploration.

2d. The fluctuation of the amniotic fluid, and the ballottement of the fœtus, can be best observed between the end of the fourth and the commencement of the seventh month of gestation.† These signs will depend, altogether, upon the preservation of relative proportion in the quantity of the fluid to the bulk of the fœtus. Now, in one case, there may be but one or two ounces of fluid, in another, as many pounds.‡ An infant at term has weighed only five pounds, and another fourteen.

Under these varieties in the quantity of the fluid and the bulk of the fœtus, it must often happen that fluctuation and ballottement cannot be elicited. The examination should be made in the erect posture.

Now the patient in this case, though examined about the middle of the sixth month of pregnancy, was recumbent; was at the time suffering abdominal pain, the abdominal muscles under tonic contraction, by which the tumour was jammed down upon the brim of the pelvis sufficiently to mask both fluctuation and ballottement.

3d. The bruit de soufflet has been considered to be caused by the rush of blood through the arteries of the part where the placenta is implanted. Moreau seems to refer it to abnormal sound generated in the aorta and its principal branches, altered and diminished in their calibre by the pressure of any tumour capable of conveying sound more readily than the mass of the abdominal viscera. It is quite probable the latter explanation is correct.

4th. I am aware that females are sometimes confident of having felt fœtal motion, when their sensations have arisen from other causes than pregnancy; I am aware, also, that accoucheurs of much more tact and discrimination than I can lay claim to, have interpreted certain obscure movements as fœtal, and have afterwards confessed themselves mistaken. But such mistake can only occur where the sign itself is confused. Now, if the shock of fœtal turbulence strikes the hand of an observer accustomed to receive it, unequivocally, he has the right to rate this sign as strongly diagnostic of pregnancy and a living fœtus as if he counted the pulsations of the fœtal heart. When this fact becomes a portion of history, communicated to another practitioner, although it may not be unfair, or reflect upon his discrimination, to be told that he may be mistaken as others have been before him, it seems too much that he should be expected to give up his belief in his own sensations.

5th. Two and a half months after the probable death of the fœtus, and three and a half after the simulated labour, there cannot be detected any physical signs of pregnancy, save only the local intumescence.

* Signs of Pregnancy, Cyc. Pract. Med.; London edition, v. iii. p. 484.
† Ibid, p. 483. ‡ Moreau.

By the term pregnancy, I understand a process in the human female, limited in duration to about nine calendar months. At the end of this period, for the most part, delivery ensues. But by reason of a faulty location of the product of conception, upon some other surface than the interior of the womb, impossibilities to delivery may be established. Although, in such cases, that product may remain for months or years, enclosed within the abdominal cavity of the female, yet the relations of pregnancy no longer exist, the ovum becoming classified among dead and foreign bodies, accidentally introduced amidst living organs.

In extra-uterine pregnancy, nature seems blind to her own mistake. The interior of the uterus becomes lined with decidua; the organ itself is developed to twice or thrice its former volume; the surface of the tissue, to which the ovum is attached, takes on the functions of the inner surface of the womb; vessels are multiplied and enlarged in the vicinity of the placental adhesion, and the arrangement of the capillary loops of both the maternal and fœtal circulatory apparatus is most probably not dissimilar to that which is established in normal pregnancy. The mammary glands prepare to furnish nutriment for a fœtus which can never see the light, and finally the vagina becomes lubricated, and the contractile tissue of the uterus exerts parturient efforts.

Now, perhaps, for the first time, nature awakes to her error. The contractions of the uterus necessarily fail of their object, and soon subside. If alive to this period, the fœtus perishes, it being impossible for fœtal life to be protracted beyond the full term of utero-gestation. The vascular apparatus, hitherto assiduously preserved, by which the elements of nutrition and growth had been transferred from the maternal to the fœtal system, now becomes obliterated. The fluids of the ovum are in progress of absorption. The ovum becomes enveloped in a cyst or shell (sometimes found ossified after a long period), not unlike the encasement of areolar tissue surrounding a leaden bullet, accidentally lodged in the flesh, and for the same object, viz., to protect the sensitive structure from the too immediate contact of a foreign or dead substance. Lactation may continue or recede, but the organs recently developed by the law of gestation, in reference to parturition, assume a retrograde process towards the unimpregnated state; and so perfectly is this sometimes attained that women have been known again to menstruate regularly, nay, have even conceived and borne other children.

Under such circumstances, the female has no more right to present the physical signs of pregnancy, except an enlargement of the abdomen, than if she had been duly delivered, five and a half or three and a half months before. If, at such interval, the absence of such signs contradicts the existence of pregnancy in the case of Mrs. ——, it would equally contradict it in every case of extra-uterine fœtation that has ever occurred since child-bearing was a process of the human female.

With these apologies for the defective items in one case, I consider the following corollary established.

The history of Mrs. ——'s case is the history of pregnancy.

It may be seen that I have not urged my impressions of having made out the head of a fœtus, in my examination in November, 1848. I have not, 1st, because those impressions were too indistinct to bring them in as an argument; 2d, because they were not confirmed by subsequent examinations; 3d, and especially because all the information derived from the exploration of the interior of the pelvis belongs to the support of a second corollary.

If it were stated of a woman, whose uterus was developed to the size it

attains at a period just anterior to quickening, whether occupied by an ovum or an amorphous mass, that her os tincæ was to be found high and close behind the symphysis pubis, we should be led to infer that the body and fundus of the womb were alone enlarged, that the enlargement would be nearly globular (the whole womb being gourd-shaped), that the organ would be contained in the cavity of the pelvis, its fundus directed towards the sacrum, below the promontory of that bone; in other words, we should consider it a case of retroversion of the womb. At the stage spoken of, whether slowly or suddenly induced, there could not fail soon to happen, impaction from the increasing mass within its limited bony confines, embarrassment of the office of the rectum from the compression, but more than all, occlusion of the neck, and overfilling of the cavity of the urinary bladder. Those who have witnessed, those, especially, who have experienced personally this last affection, can appreciate the sufferings arising from it. But there is not only distress, but also danger from retroverted uterus. Denman regarded this displacement to be secondary to some failure in the timely evacuation of the bladder, and accordingly recommended relief to the latter organ, leaving the uterus to rectify itself. Other authors, with more reason, give us instruction, besides the use of the catheter, to institute such manual assistance as shall lift up the fundus of the womb, cause the organ to retrace the steps of its displacement, and undergo a sort of artificial quickening. The re-adjustment of the position of the fundus uteri necessarily restores the os and cervix to their normal site. If proper care be taken afterwards, for a short period, the progressive growth of the uterine tumour will prevent a subsequent retroversion and re-descent, simply because it soon acquires a diameter larger than that of the superior strait.*

Now, anterior to the quickening in the case before us, no complaint was made of impaction, of difficult defecation, of retention of urine, and therefore it is fair to infer that there had been no retroversion. But, if there had, when the abnormal position of the os uteri was discovered in the middle of November, 1848, the abdominal tumour was not only above the brim of the pelvis, but was too large to descend below it. From that point of time the development progressed, till, to the eye and hand, it presented the character of the gravid uterus at term, whose volume is such that the vertical axis is from ten to twelve, the antero-posterior seven to eight, the transverse, on a level with the insertion of the tubes, nine inches.† The whole womb, from being gourd-shaped, ultimately becomes ovoid. The vertical diameter, or axis, extends from the os uteri to the middle of the fundus. It occupies nearly the position of the axis of the superior strait. Now, the ovoid, standing with its axis at right angles to the plane of the strait, its anterior face jutting normally against the parietes of the abdomen, and a fundus being recognized at some elevated point above the umbilicus, if the os uteri be found, under such circumstances, between the tumour and the pubes, without congenital malconformation, known not to exist in the present case, it is mechanically impossible that the tumour which distended Mrs. ——'s abdomen could be the womb. The intumescence being distinct from the womb, and having been proved to be caused by an ovum, that ovum is exterior to the cavity of the

* Upon a passage in Colombat, in which the author enumerates retroversion among the accidents of the later periods of pregnancy, his able American translator and commentator remarks, that retroversion should not have been placed on this list, because towards the close of pregnancy, it is impossible.—Op. cit. p. 36.

† Moreau.

womb, or, in the words of my second corollary, the ovum of this pregnancy is extra-uterine.*

If the points embraced in the foregoing corollaries are established, what is the relative position of the ovum to the womb? Having never before, in the course of more than thirty years' engagement in obstetrical practice, amidst a dense population, met with a case of extra-uterine gestation, and ignorant of any classification of the varieties of that which is ventral, partly, perhaps, because of the absence of authorities from within my reach, I reflected that the situation of the cervix and os uteri being similar to that which exists in retroversion, in which the uterus revolves from the vertical to the horizontal position, upon an axis in its cervix, while the other elements in that displacement do not present in the case before us, I assumed, as a fact, that the vaginal support of the womb was a fixed point in the pelvis. Supposing the ovum to be located between the abdominal walls and the anterior aspect of the uterus, adherent extensively to the latter, its growth would press the organ downwards and backwards upon the superior strait, while the adhesions might drag upwards the os uteri where we had found it; they would likewise preserve the fundus in an approach to its normal upright position, out of the reach of ordinary manual exploration.

To leave this unfounded and perhaps absurd conjecture to stand as it did, at the point of time in the history of our case to which we had arrived at the commencement of these comments, let us now pursue the sequel of the history itself.

On the 30th of August, Mrs. —— again became my patient. She was much more emaciated, her complexion was sallow, and her countenance careworn. She suffered greatly from abdominal pain, partly referred to the intestines, which were torpid, partly described as cramplike, running from her side to the pubis, and at one time as a sensation of something hard, pressing downwards within the pelvis. She was obliged to continue the use of large and repeated doses of morphia, with occasional laxatives interposed. She spoke of some hemorrhoidal sensations in the rectum, and some difficulty of urination, the latter always, however, surmounted. Her pulse was accelerated (being from 120 to 130 per minute), and small in volume. She had marked exacerbations of fever towards evening, followed by profuse sweats at night. The hectic aspect of the case, and the resulting dilapidation advanced, so that about the middle of September, she did not seem likely to survive many days. About the 20th, a free diarrhœa, along with much nausea, supervened, supposed to be caused by an error of diet, which wasted her flesh and strength

* In this bona fide transcript of the arguments which constrained me to dissent from the view of the case differing from my own, I was obliged to reason, in support of my second corollary, upon the facts, under the general principles of mechanical obstetrics, for there were no authorities to which I could conveniently appeal. I was aware that very many details of cases of extra-uterine pregnancy were scattered through the periodicals of the last thirty years, but I lacked the time, and possibly the industry, to wade through more than two hundred volumes of those journals, half of them still in pamphlet form, to find some analogy with the case before us.

Searching, afterwards, with an entirely different object, I met with an analytic review of "A Memoir on Extra-Uterine Gestation, by Wm. Campbell, M. D., of King's College, Ed.," from which if I should quote all that seems parallel to the case of Mrs. ——, I should swell this communication beyond what is already too much extended. Referring, therefore, to the number of the "Med.-Chir. Review," for July, 1840, p. 178 et seq., where the analysis may be found, I cannot forbear introducing the following remarkable sentences, viz: "When, after the presence of fœtal movement cannot be questioned, the cervix uteri is found directed towards the pubis, so much elevated on the brim that it can be felt with difficulty, or cannot be reached at all, there need, generally speaking, be little doubt as to the presence of extra uterine gestation."—Op. cit. p. 177.

still more. In a day or two, however, the diarrhœa abated, when she informed me that there had come on a free, purulent, and highly offensive discharge from the vagina, along with which, on the first day of its occurrence, were some fragments of solid substance. With this discharge the hectic diminished materially. She had now so little pain as to dispense with her opiates, and her bowels became regular without medicine; her appetite, sleep and strength improved. The abdominal tumour was sensibly diminished. It was tympanitic upon percussion, and no bruit de soufflet could be heard.

An examination per vaginam had been spoken of by herself, on the first day of her return to my neighbourhood, but postponed till she could become settled in her new home. When the more serious general symptoms presented themselves, I felt no disposition to press an examination, and after the discharge (the fetor of which was perceptible in the room), occurred, she was desirous of waiting till it should cease. The examination, therefore, became deferred till the 12th of October.

At my evening visit on that date, finding her suffering unusually with pain referred to the back part of the interior of the pelvis, I made an examination.

Beyond the sphincter vagina, the enlarged space commonly found seemed contracted, its mucous surface turgid and full. I could not pass the finger to the point where the os uteri had been formerly reached, not because of any closeness between the tumour and the pubis, but apparently from an adhesion of the sides of the vagina, just below the os uteri itself. The sphenoidal projection at the superior strait was perforated centrally, so as to admit the forefinger freely. The ulcerated passage was smooth and broad, as to its anterior face, but posteriorly presented a cleft whose terminus I was unable to reach. The vertical measurement of the passage was at least seven-eighths of an inch. Above and beyond it, the finger came into immediate contact with the head of a fœtus, the bone touched appearing stout, and impulse made upon it proving no disruption of the head itself to exist. Partly in consequence of the distance from the os externum, and partly from surrounding embarrassment to a free sweep with the finger, I did not make out any suture. In my efforts to do so, I peeled off a portion of soft parts from the bone, which coming away on the finger was examined, and found to be a fragment of scalp, upon which the hair appeared as mature and as thickly set as is usual in the majority of children at birth. At subsequent examinations, the length of the false passage was diminished, and a suture presenting considerable angularity occupied the cleft, now become somewhat divergent.

On one occasion, the discharge had stopped for some time, and much pain was complained of, when the examination was followed by relief from pain, with free discharge and audible accompaniment of flatus. Sometimes the abdomen was larger to the eye, at which time she would speak of a sense of distension, and then an evacuation of gas would lessen the enlargement, the discomfort, as well as the tympantic sound. About this time, the lower extremities became infiltrated, but the œdema again receded.

Towards the last of October, having complained for a week or more of numbness in the right upper extremity, there came on a sensation ascending from the hand to the shoulder, which, from its description and sequence, I took to be an aura epileptica. Involuntary twitches ran up the limb, and reaching the shoulder, the patient "became blind." This was her own account. Her friends stated that then she was thrown into "universal spasm with insensibility." I awaited the third and fourth paroxysms, and noticed that the precursory aura and local contractions, along with entire consciousness and a great deal of alarm, continued for ten or twelve minutes before the ter-

mination in a fully formed epileptic convulsion. Upon the following evening, she had four more such attacks, the interval between two of them being not more than one or two minutes. An epispastic being applied along the dorsal spine, and vesicating well, the convulsions ceased excepting that she had a slight one within the next twenty-four hours as she awoke in the night. For the two succeeding days, she was agitated all over, but especially in the right half of the body, with choreiform contractions affecting the features and speech, less than is usual in chorea itself. Any impression made on her mind modified this agitation, according as it tended to quiet or disturb her. The jactitation subsided during sleep, procured by full doses of black drop.

For a week or more she rallied considerably, but was again suddenly seized with a return of convulsion, ushered in with a piercing scream. Throughout that night, there was no complete cessation of the spasms, but remissions and exacerbations only. In the morning they wore off, when the choreiform movements recurred with the recovery of consciousness; and now it was discovered that the motor organs of the right side were paralyzed, the sensibility for the most part being entire. Her face was slightly distorted; the right cheek was benumbed, but the tongue was protruded without obliquity, and the speech and intellect were intact.

Her right leg and foot became œdematous; the partes muliebres and nates were reported to be raw and swollen, the one from the acrid discharge, the other from pressure added thereto. The next morning, after the announcement of the paralysis, the obliquity of the features disappeared; but the impairment of the motor agents of the limbs remained permanently unchanged.

For some two or three weeks before her death, cough with much expectoration became troublesome. The chest sounded well upon percussion, but no stethoscopic exploration was made, as it was not possible to make it full and satisfactory, from her inability to take or keep a convenient posture.

On the 15th of November, having once more slightly rallied, the epileptic paroxysms returned, and ceasing the next morning, she was left feeble, with considerable consciousness, and apparently without suffering, until the 18th, about 2 o'clock P. M., when she expired.

Autopsy, November 19th, 1849, 20 *hours after death.*—Present Drs. E. C. Alexander, Arthur Pue and myself. Weather moderately cool; corpse emaciated; countenance placid.

And incision was made in the linea alba, from just below the ensiform cartilage of the sternum to the left of the umbilicus, thence extending divergently to the middle of Poupart's ligament of either side. Left lateral flap slightly adherent to a smooth purplish tumour, occupying all the space exposed, except where bounded above by the large intestine. Upon the fundus of the tumour, there was either a portion of omentum void of fat, or pseudo-membrane, from which it could not be distinguished. The cyst being opened by a longitudinal incision, the body and limbs of a fœtus compactly situated were presented to view. The thickness of the cyst was about a line and a half. The skin and subjacent soft parts of the fœtus were so completely converted into adipocire as to resemble hogs' lard, into which the finger penetrated almost as easily. Upon lifting it out carefully, the head was found to have occupied the lowest region of the cyst, and at the termination of the funis umbilicalis, there was a small volume of shreds, the remains of the placenta, unadherent; but seeming to have occupied a point to the left of the upper and posterior region of the cavity.* I thought the fœtus felt heavier than its size

* If my designation of the point of placental attachment be correct, the bruit de souffle heard by myself, and also by my friend Dr. ——— afterwards, must have made its

indicated. The anterior surface of the cyst was thickly smeared with adipocire, the detritus of the fœtal integuments. The head was much altered from its normal shape, but whether from the commencement of disruption before removal, or in taking it out of and returning it to the abdomen, was not accurately noticed. The remains of a scrotum proved the fœtus to be male. Its head was thickly coated also with adipocire, entirely masking from view the hairy scalp. I pointed out to my colleagues an abrasion, from which I had five weeks before removed a fragment of the scalp.

The medical gentlemen present with me concurred that the development of the fœtus seemed mature. Its longitudinal measurement was not taken or estimated, as the body was not laid out at length. It was not weighed, but each of us formed an opinion on the subject, not expressed at the time. Upon inquiring afterwards, we differed somewhat; but the lowest supposition among us was that it would slightly overreach seven pounds.

The womb and its appendages lay anterior to the cyst, close upon the pubes. The former presented its unimpregnated volume, being from two and three-quarters to three inches long, about two broad, and something over one antero-posteriorly. These organs were sound and natural, excepting that a vesicle containing about f℥j of yellow serum arose from the left ovary. The sacral aspect of the uterus was closely adjacent and adherent to the anterior wall of the cyst; but the ovaries and tubes were free. I opened the uterus from its fundus to the os tincæ. Its interior was healthy but dark-coloured, containing no decidua. If it might be flattened by the long continued compression to which it had been subjected, there existed no particular attenuation of either wall, these being each from four to five lines in thickness. No rent or cicatrical evidence that this had existed presented itself in the uterus or the cyst.

The most dependent part of the cavity was perforated through into the upper region of the vagina, through which the finger passed freely. I did not examine into the probability of adhesion in the vagina below the os uteri, in consequence of the presence of a member of the family at the dissection, as I was unwilling to expose the person of the corpse for that purpose, and I deemed the fact of minor importance.

Remarks.—The result of the autopsy having verified my diagnosis in the general, also exposed to me how unfounded had been my conjecture as to the relative position of the ovum to the womb. I have called that conjecture absurd as well as unfounded. Assuming that ventral pregnancies do occur primarily, the fœcundated germ fails to enter the osteum abdominale of the Fallopian tube because the fimbriated extremity relaxes its grasp upon the ovary, and the accurate adaptation of the osteum to the ovisac at the point of its rupture is interfered with between the moment of impregnation and the transit of the ovule into the tube, the germ, therefore, necessarily becomes misplaced within the peritoneal sac, and the ovary being enclosed in the posterior duplicature

auscultatory track through the body of the fœtus, rendering it unlikely that this sound can proceed from the causes to which it has been ascribed by Kegaradec, Kennedy, &c. Moreover, being heard as late as May or June, *i. e.*, one or two months subsequent to the simulated labour, strengthening the views of Bouillaud and Moreau, who trace it to the modified circulation on the maternal aorta and its branches. Montgomery, also, mentions one case of vascular sarcoma, and another of supposed enlargement of the spleen, when this sound was clear and distinct.—Cyc. Pract. Med., Art. Signs of Pregnancy.

of the broad ligament, it would seem impossible that the error loci should cause the ovum to be found upon the pubic aspect of the womb.

It was perfectly clear that, instead of that part of the vagina into which the cervix uteri is implanted being fixed in the pelvis, an ovum, or any other growing tumour, located behind the womb is competent to press forward the whole organ, along with the superior end of the vagina, and cause the os uteri to be recognized, where, during the lifetime of this patient, it had been so frequently found. I have now no manner of doubt that, had a careful surpubal examination been made at the proper time, the outline of the fundus uteri might have been traced to distinguish the uterus from the abdominal tumour. The neglect in this instance is mine alone, as the proper time would have been either during the development of the organ and previous to the pseudo-labour, or after the extreme emaciation of the patient.

Besides this spontaneous call for comment by the autopsy itself, my attention has been drawn to another point, by a letter from a medical gentleman deservedly standing high both as a teacher and practitioner of obstetricy, containing some inquiries and suggestions to which it seems to me not improper here to reply.

My friend states "that he has entertained doubts of a perfect and great development of an ovum upon a placento-serous tissue, but that the post-mortem details of the above case are almost enough to cause him to abandon those doubts." Recurring, however, to a fact communicated to him during the lifetime of the patient, viz., that at the last of March she had pains and vaginal show, he asks, "Were these labour pains? Did the womb rupture at that period?"

It does not appear to me possible that rupture of the uterus could have occurred upon the occasion referred to; 1st. Because, when the earliest vaginal exploration was made, viz., in November, 1848, the os uteri must have been where it was subsequently reached, close and high behind the pubis. The dissection discloses it there in November, 1849. Why? Because the ovum was exterior and posterior to the womb. Now, to suppose that the pregnancy had been intra-uterine antecedently to the last of March, 1849, that among the events of the pseudo-parturition, the womb had been ruptured and extended the ovum from its cavity into the peritoneal sac, is to seek for a work of supererogation, as well as to leave the abnormal site of the os tincæ, made clear by the first examination, unaccounted for. The rationale of this faulty position of the os tincæ in November, 1849, must be the rationale of that in November, 1848.

2d. Rupture of the womb (an accident which has hitherto, happily, never come under my notice) is universally deemed a formidable, not to call it a fatal, incident in parturition. Intense shock to the constitution, along with external or internal hemorrage, or both, has never failed to attend. The letter alluded to suggests, however, "that progressive attenuation of a part of the uterine parietes sometimes is set on foot during pregnancy, rendering rup-

ture an easy occurrence from the contractions of labour, that attenuation might proceed to such a degree as to cause the evidences of such an accident to be but slight." No doubt this may be somewhat true; but, although such circumstance might materially lessen the hemorrhage consequent upon such an event, would it lessen the shock? Does not this arise more from the sudden intrusion of the ovum, a quasi foreign mass, into the peritoneal cavity, unprepared for, and as it were not expecting it, than from the mere laceration of the womb itself?

The pains of the 30th of March were uterine and parturient. The patient stated them to be but slight. No exacerbation occurred during my absence from her chamber. They wore off in a few hours, without any sensation in the patient requiring me to be called up, and no hemorrhage of an external character accompanied.

3d. I examined the uterus and its appendages, as carefully as my limited anatomical knowledge permitted, and found no attenuation, no rent, no cicatrix, or sanguineous effusion. The ventral or abdominal extra-uterine location of the ovum must have been established ab origine, and there does not exist the smallest evidence that it occurred consecutive to a rupture of the uterus, the tubes, or the ovary.

Writers seem anxious to explain away cases of ventral pregnancy. They admit the ovular and tubular varieties of extra-uterine fœtation; in which cases the cyst, which at first serves the ovum in loco uteri, is supposed sometimes to rupture and throw it forth from its first location into the abdominal cavity, to form placental attachment where it may. To support this supposition they tell us that the rent through which the ovum escaped may have been overlooked at the autopsy. Now, although this is to substitute conjecture for proof, throwing the *onus probandi* on those who might be disposed to dispute their explanation, it is still a conjecture at variance with the suggested doubts of my friend—it being far easier to believe that the product of conception can establish a placental attachment when a minute fœcundated germ, than that, somewhat developed, it could be detached from its first connections, and then go forth to form a new implantation. But have not doubts of the capacity of a serous tissue to support an ovum been already cleared away?

Blundell says, "I have myself seen a fœtus, on the whole not imperfectly formed, about the size of six or seven months, and which was taken from a boy, where it lay in a sac in communication with the child's duodenum, the boy being pregnant. I cannot accede to the opinion advanced by some that it is impossible that a fœtus should form within the peritoneal sac among the viscera."

Mason Good, also, refers to a case, published in the *Med. Chir. Trans.*, vol. i. page 241, by Mr. Young, "where the nucleus of fœtal rudiments were found in the abdomen of a male infant about fifteen months old, well known, from personal inspection, to nearly all the medical practitioners of London;" probably the identical case mentioned by Blundell.

A number of cases of extra-uterine pregnancy, in which the placenta was found adherent to the peritoneum, are mentioned also in the work of Colombat de l'Isère, for the translation of, and additions to which, the American medical public stand under such enduring obligation to Professor C. D. Meigs, of Philadelphia.