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PART FIRST.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On Development of the Placenta within the Fallopian Tube.* By J. M. PAGAN, M.D., *Professor of Midwifery in the University of Glasgow.*

It is not my intention to enter at any length into the subject of the development of the ovum in preternatural situations,—I shall simply observe, that it is well known to all, that the ovum may be arrested in its descent through the Fallopian tube, and may be developed there, to a more or less advanced stage. Cases are recorded where the infant has been developed in the tube, and the uterus expanded by the liquor amnii contained within the membranes attached to the uterus. In one such case, the child's head was presenting into the cavity of the uterus, and the remainder of the body was in the tube; and in another, a lower extremity presented into the uterus, and a living child was extracted, from the tube, through the solution of continuity, the infant was found in the cavity of the peritoneum; the umbilical cord passing from the belly of the infant through the tube for a short distance, was inserted into the placenta, the only part of the ovum which was in the uterus. These cases are mentioned on the authority of Carus and Hoffmeister. In these cases the infant alone had been developed originally within the tube, which had given way at an early period of gestation, and the women had lived till the full period. In both cases the Cæsarean operation was performed; in the one before, in the other subsequent to death. In the case recorded by Carus, the woman died of hemorrhage in consequence of separation of the placenta, under uterine action; and the infant, which was not putrid, was fully

developed, and the mother had been conscious of its motions shortly before her death, which led to an attempt to save its life by the Cæsarean operation. It would seem that not only the whole, but any part of the ovum, may be developed in the Fallopian tube. The subject of tubal pregnancy is one of very great practical importance. Ritgen has succeeded in one case in inducing the premature expulsion of the ovum from the tube; and, when we reflect upon the usual issue of these cases, we are fully warranted in attempting to put a stop to the farther development of the ovum, or to procure its early expulsion.

The object of the present paper is to direct attention to the development of the placenta, either partially or entirely within the tube. This subject has not hitherto received much illustration from accoucheurs; it is left altogether unnoticed in our systematic works on midwifery; and I believe, though I have not entered into any extensive research, that Riecke and D'Outrepoint are the only writers who have directed the attention of the profession to this subject as one of practical importance, giving rise, as they believe, to abortion in the early periods of gestation, and to retention of the placenta in the last stage of labour, frequently mistaken for one or other of the varieties of irregular uterine contraction. Whether the development of the whole, or a part of the placenta within the Fallopian tube, be a frequent occurrence, giving rise to abortion in the first place, and to retention of the placenta in the second, may be questioned; yet, that it does occur occasionally, is beyond doubt. It is impossible, I think, to admit that all the cases mentioned by Riecke and D'Outrepoint were really instances of this; the evidence, at least, is defective, though many of them undoubtedly were so. I have nothing to say as to this abnormal situation of the placenta as a cause of abortion, as asserted by those writers, though I do not doubt the fact; and I shall confine my observations to the development of the placenta within the tube, as a cause of retention of the after-birth.

Our knowledge of the respective structures of the placenta and Fallopian tube sufficiently explains how the occurrence should take place. The placental vessels shoot into the uterine extremity of the tube, the tube is susceptible of expansion, the placenta is developed just as within the uterus, the respective circulations are maintained through the usual channels, and when the infant has been expelled, the contraction of the circular fibres at the uterine extremity of the tube sufficiently accounts for its incarceration; and of course it may be retained by morbid adhesions. Some remarks have been made by D'Outrepoint upon the diagnosis of this situation of the placenta, before or during labour. I think it would not be safe to hazard a very positive diagnosis upon the grounds which he mentions. He chiefly insists upon the inequality of the uterine surface as ascertained by external examination, and states, that this inequality, as if the uterus were divided by a partition, which was formerly thought to indicate

the presence of twins, and more recently, was ascribed to the unequal expansion of the uterus, is mainly owing to this situation of the placenta within the Fallopian tube; that the inequality of the uterus continues, even though considerably contracted, after the expulsion of the infant, and is only removed by the separation of the placenta, and its expulsion into the cavity of the uterus, or into the vagina. But there are many causes of inequality of the uterus, as ascertained by examination through the abdominal parietes, which are referable neither to the presence of twins, nor to the unequal expansion of the uterus, nor the development of the placenta within the tube. I have nothing to offer in reference to the diagnosis of the placenta within the tube before or during labour, except that I should hope to derive some assistance from auscultation, if I discovered a well-defined tumour of the uterus in the situation of the uterine extremity of either tube. The discovery of this cause of retention of the placenta after the birth of the child, is the most important point, because if not detected, and treated in the proper manner, it may give rise to hemorrhage, and to the fatal result which frequently ensues upon the retention of a portion of the after-birth; and this cause may be suspected, if the uterus be pretty equally contracted, assuming nearly its natural figure, with the exception of a well-defined soft tumour in the situation of the uterine extremity of either tube. It is true you may have a tumour within the walls of the uterus itself, which in some cases I have known to increase with the enlargement of the uterus during gestation, and gradually to diminish, probably to the size which it had attained before pregnancy ensued. Yet I think the two conditions may be distinguished. It is, however, unnecessary to enter into this point, because it is obvious that if the development of the placenta within the tube should occasion hemorrhage, or prove a cause of retention, it would lead to the usual practice in such cases, and to the discovery of the cause. It is not certain that the placenta may not be wholly, or partially developed in the Fallopian tube, though we do not discover it, because the muscularity of the tube increases with its expansion; and unless there should be preternatural adhesion, or irregular contraction, particularly of its sphincter fibres, the tube itself is capable of separating the placenta from its attachment, and expelling it by its contractility into the cavity of the uterus.

I shall shortly detail the particulars of the only case which has occurred to me, where I was certain that a portion of the placenta was developed within the tube, and where it gave rise to retention, and secondary hemorrhage. About thirteen months ago, I had occasion to see a woman forty-one hours after delivery of her third child, by a natural and easy labour. I visited the patient on account of considerable loss of blood which had been taking place since the birth of the child. Upon examining the abdomen, I found the uterus considerably expanded, and presenting that peculiar

doughy feeling which is characteristic of the presence of coagula of blood within its cavity, when there is no contractility and but little contraction. In the situation of the left Fallopian tube there was a well-defined soft tumour, springing immediately from the uterine walls, nearly as large as an infant's head at birth, and easily detected through the tall, attenuated abdominal parietes. I was told that the placenta had been removed with difficulty. It immediately occurred to me that this was a case where a portion of the placenta had been left in the tube; and after vainly endeavouring to exert contraction of the tumour and uterus together, I introduced my hand through the clots of blood with which the vagina and uterus were filled, till I came in contact with a portion of the placenta adhering pretty firmly to the side of the uterus, near the margin of the expanded Fallopian tube to which the remainder of the placenta was likewise morbidly adherent. I separated the placenta from the orifice of the tube all round, and withdrew the whole, which presented a considerable prolongation, which is well illustrated, in the accompanying woodcut, taken from a most accurate drawing of the recent preparation. Im-

mediately after the withdrawal of my hand, with the portion of the placenta which had been retained, and the clots of blood with which the uterus was filled, the uterus contracted well and equally; the defined tumour, all but completely disappeared, there was no return of hemorrhage, and the woman's recovery was uninterrupted. It is generally unsafe to place much reliance upon the statements of patients themselves, as to particular swellings, which they say they have been conscious of in the abdomen during pregnancy; but this woman assured me, she had been sensible of a large tumour, for a considerable time before her labour, in the situation of the left Fallopian tube. It is not improbable that the development of a cotyledon of the placenta within the tube, prolonged to its free extremity, may account for those cases where blood in considerable quantity

has been effused into the cavity of the abdomen, and where no other source, except the uterus could be conjectured, from which the blood could have proceeded; at all events where there was neither rupture of vessels, nor solution of continuity. It is not probable that blood in considerable quantity would make its way along the Fallopian tube, unless its calibre were preternaturally enlarged.

Through the politeness of Mr J. Bell of this city, I am enabled to enrich my paper with the particulars of the following most interesting case; in which a post-mortem examination proved that a portion of the placenta had been developed within the Fallopian tube, the retention of which occasioned the fatal result. I give the case in Mr Bell's own words:—

"The case, of which the following account is a summary, occurred in the practice of my late partner, Mr Hunter, January 3, 1838. Mrs M'D., after a tedious labour, gave birth to a male child. About an hour afterwards, considerable hemorrhage took place, and though cold in the usual modes was assiduously applied, yet the flooding increased. Mr H. determined to remove the placenta, and was in the act of introducing his hand for that purpose, when the woman fainted. The relatives becoming alarmed, I was sent for. I found the patient pale and much exhausted, the loss of blood somewhat diminished, and the placenta still in the uterus, which felt large and soft. The immediate extraction of the placenta was resolved on. Its removal was effected with considerable difficulty, in consequence of its adhering firmly to the uterus. After its separation, the uterus contracted, and the hemorrhage ceased. The placenta was much lacerated, and extensively indurated on its uterine surface.

"During the night, several clots were discharged from the vagina, and slight hemorrhage returned, but it was suspended by the application of cold to the nates and vulva.

"On the 4th and 5th, the patient had no complaint but debility. On the morning of the 6th, she had a rigor, which was followed by severe pain in the lower part of the abdomen, and other symptoms of peritonitis. Mercury was employed both internally and externally, along with rubifacients, &c., but without advantage. She sunk and died on the 10th, the seventh day after delivery.

"*Dissection thirty-six hours after death.*—The abdominal cavity contained about two pounds of serous fluid, mixed with small pieces of soft lymph. The peritoneum of the parietes of the lower part of the abdomen, and of the intestines, was reddened or congested at several points; the peritoneal covering of the uterus was very much congested, presenting several patches of a deep crimson hue, and surrounded by layers of soft lymph; the cellular tissue was filled with a thin yellowish purulent-looking fluid. On making a section of the uterus, we found in its cavity about an ounce of dark-coloured fluid, of an offensive odour; the mucous membrane was of a dark

colour, and very soft. Near the fundus uteri, towards the right side, a blackish substance, about the size of a large plum, was observed;—it was found to be a portion of the placenta adhering firmly to the uterus. Whilst removing it, we discovered that it penetrated the Fallopian tube, on opening which we found a portion of placenta measuring $3\frac{1}{4}$ inches in length, and adhering to the tube round its margin as it entered the uterus, at which place it was fully three inches in circumference, but gradually tapered into a point as it approached the other extremity of the tube.

“A medical gentleman (since deceased) who was present at the inspection, for some time insisted that Mr Hunter, in separating the placenta, had used too much violence, and had pushed a portion of it into the Fallopian tube.

“Besides many other obvious reasons, the adhesions which existed between the parts were sufficient to disprove any such opinion; indeed, our friend was obliged (though very reluctantly) to acknowledge his error.”

ARTICLE II.—*Black Phthisis, or Ulceration induced by Carbonaceous Accumulation in the Lungs of Coal-Miners.* By ARCHIBALD MAKELLAR, M.D., Fellow of the Royal College of Physicians of Edinburgh.

(Continued from p. 653 of September number.)

IN the September number of this Journal there was given a short account of the cause and progress of the “Black Phthisis” incident to coal-miners. From a variety of cases to which my attention was directed, I have selected *ten*, with the *post-mortem* appearances in nine of them. These cases extend over a period of eleven years, all of them exhibiting, with some slight variation, the same character of disease, and proceeding from the same cause—inhalation of carbonaceous matter. Some of the cases occurred as far back as the years 1833–34, while the last case came under my notice within these twelve months. Of the ten patients, six were engaged at one period with stone mining, and four were entirely coal-miners; eight expectorated carbonaceous matter, and two did not show any indication of black infiltration from the sputum; six exhibited most extensive excavations of the pulmonary structure; and only three general impaction of these tissues, with numerous small cysts containing black fluid; the tenth, I regret to say, was not examined, owing to neglect in communicating in time the death of the patient, which took place a few weeks ago. These morbid appearances exhibit three stages of the disease. The first is that where the carbon is confined to the interlobular cellular tissue, and minute air-cells, producing cough, dyspnoea, slight palpitation of the heart, and acceleration of pulse, while, at the same time, the patient continues able to prosecute his daily em-