PLACENTA PRAEVIA.

[WITH SPECIAL PLATE.]

BY

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A LITERARY expert whose brilliant work is justly revered writes: "Every book that can be called a book has had one interested and excited reader." Unsympathetic isolation has not been the fate of textbooks on midwifery; on the whole, they have been welcome and reliable guides to numerous readers, and highly creditable to their authors.

Exception cannot be taken to their chapters on *ante-partum* haemorrhage. The verbosity of the older writers on placenta praevia recalls the literary clothing of the political wisdom of Burke.

Placenta praevia, notwithstanding the complete literature and the increasingly successful treatment of its haemorrhage, still continues to repeat its chilling spectacle of an avoidable stillbirth.

A group of specimens illustrating various types of these avoidable stillbirths is available in the obstetrical museum of the University of Liverpool. The corresponding clinical situation appeals for amendment, which must be reached by earlier concentration and co-operation concerning three important particulars: (1) The *ante-partum* haemorrhage; (2) the viability of the fetus; and (3) the bulk and area of the placenta within the obstruction zone.

Collectively, the three are pertinent to pregnancy and labour when the placenta praevia is central, that is, complete, or almost central, that is, low lateral and overlapping, at, or after, the thirty-sixth week of gestation.

Singly, the *ante-partum* haemorrhage demands the maximum of attention. This it has received by a liberal sacrifice of the fetus as a maternal plug.

A fetus alive and situate mostly above the obstruction of a thickened and damaged placenta possesses faint prospects of survival. Only a speedy and safe birth-route can supply the whole of the requirements of labour in the graver degrees of placenta praevia in advanced pregnancy.

Let me give two examples:

CASE I.—*Caesarean Section for Central Placenta Praevia.*
(37½ week.)

On September 1st, 1918, Dr. Moss, of West Kirby, called upon me with the information that he believed a central placenta praevia in one of his patients, a 6-para aged 40, had led to two smart haemorrhages—lasting two days and one day with a week's interval—at the thirty-fifth and thirty-sixth week of gestation. Clearly the Maternity Hospital was urgently the place for the patient, and September 10th was mentioned for the operation, provided bleeding did not return in the interval.

Bleeding did return on September 6th, exactly at the 37½ week of gestation. At 7 a.m. the trickle of blood was noticed, and at 10.15 a.m. its volume was increasing; there were no clots. Caesarean section was performed at noon, and a child, 6 lb. 3 oz., was extracted alive. The uterine attachments of the placenta were four-fifths to the left and one-fifth to the right of the cervix, mainly along the anterior wall of the uterus. The placenta weighed 12½ oz.; it had partly underlain the uterine incision, as shown by the notch, measuring 1½ inches, inflicted in its upper border. The patient convalesced normally. She and her breast-fed infant left the hospital in good health seventeen days after the Caesarean section.

In this case Dr. Moss concentrated his attention on the early complete diagnosis from the smart haemorrhages and the detection of the living fetus, in the first vertex position, and of the placenta around the cervix in the lower zone of the uterus on vaginal and abdominal palpation. Confirmation of Dr. Moss's diagnosis was acknowledged in hospital by all of us in our efforts, amid favourable resources for operation, to respond rightly and fully to the opportunity.

CASE II.—*Caesarean Section for a Low Lateral Placenta Praevia.* (Full Term.)

A primigravida, aged 39; in labour. The fetus, in the first vertex position, above the brim of a flat pelvis, was out of reach on ordinary internal examination. There had been an initial smart haemorrhage. Caesarean section, performed on March 1st, 1917, conferred safety on the mother and preserved the life of the male child, 7 lb. 1½ oz. in weight. The prompt transference of the patient to the Maternity Hospital after an early diagnosis of a low lateral placenta praevia was due to the care and foresight of Dr. McIntyre Brown of West Kirby.

Soon after the patient was discharged from hospital her convalescence was delayed by mild post-operative phlebitis.

The bright clinical aspects, just presented, encouraged early concerted efforts. The cheerless contrasts—as silent object lessons—loom in the Obstetrical Museum.

Full Term Central Placenta Praevia.

In 1914, in the ambulance on its way to the Liverpool Maternity Hospital, a woman died of haemorrhage at the full term of gestation. A central placenta praevia, an exceptionally well-grown male fetus of large size in the first vertex position, a cervix not dilated, and an inappreciable separation of the placenta, betrayed a group of physical conditions for clinical discernment. The dark shading in the photograph (Fig. 1) denotes the increased area and the distribution of the placenta.

Clinical recognition of the placenta praevia on palpation in the vaginal fornices around the undilated cervix is more than a mere project towards the advancement of obstetrical resource. The whole specimen appeals to the eye, awakens clinical effort, and pleads for Caesarean section.

Unfortunately its clinical history remains a blank after oft-repeated inquiries by many persons in various directions. There may or may not have been reasonable opportunities for observation, advice, or action; the absence of any preliminary warning by an *ante-partum* haemorrhage was not proved; as a very rare coincidence this may be admitted as possible.

By ante-natal officers and by practising obstetricians the anatomical evidence will be appreciated, especially in its practical interpretations. The warning haemorrhage, the guidance through the subsequent interval and its hazards preceding operation, and the facilities for Caesarean section, are a formidable total. These essential considerations emphasize the need for an earnest grasp of the significance of the *ante-partum* haemorrhage. Otherwise, even version may be too late.

Central Placenta Praevia at Full Term.

In the case from which this specimen (Fig. 2) was taken there were a sharp warning haemorrhage of short duration in the course of the night of March 10th, 1913, and a recurrence of haemorrhage with the commencement of labour a week later, at 2 a.m. on March 18th. There was increasing collapse during the twelve and a half hour's delay in sending for the doctor and in the admission of the patient to hospital.

After admission at 2.30 p.m. the profound collapse was treated by intravenous and subcutaneous salines and pituitrin. At that time the bleeding had ceased, but as a precaution against further haemorrhage, after the dislodgement of clots, podalic version was performed and a leg was brought through the digitally perforated placenta; the membranes were beyond reach.

There was no further bleeding; at 6.45 p.m., four and a quarter hours later, the maternal shock ended fatally. The patient was a married woman, aged 30, who had had four previous normal labours.

Fig. 2 represents the uterus laid open to display the placenta and fetus after version.

To look back at the whole of the facts of this full-term labour is to realize the room for amending efforts, more particularly against delay; also clearly, if a diagnosis was made, it was not acted upon prior to the admission of the patient into hospital. At this stage of the inquiry judgement may be balanced.

These two specimens (Figs. 1 and 2) have demonstrated the dual fatality—to mother and fetus—attributable to haemorrhage. The specimens about to be described (Figs. 3, 4, and 5) will reveal the single fatality—to the fetus—that placental obstruction and placental damage incurred during labour may cause.

The specimen shown in Fig. 3 will convince any who may still need to be convinced that, when a considerable delay and a moderate haemorrhage in the first stage have manifested their risks, version is more defensible than Caesarean section, especially for a woman aged 37 already the mother of seven children, all living. With a less numerous family a prospective stillbirth in such a formidable setting digs more deeply and excites inquiry. If the specimen and its clinical history are considered together, the preventable stillbirth awakens practical sympathy.

Central Placenta Praevia (Thirty-fifth Week).

The estimated full term was due early in July, 1913. There were reports of two sharp haemorrhages, one of short duration on May 1st and the second at 10.30 p.m. on June 1st, treated by a vaginal pack until 9 a.m. on June 2nd, when blood reappeared at the vulva through the saturated pack.

The patient arrived in hospital at 5 p.m. on June 2nd. Then were reported: Two-fingers' dilatation of the cervix, a vertex presentation, and complete placenta praevia. The management consisted in digital perforation of the placenta, internal

version, and the lodgement of the half-breech of the fetus within the placental girdle (Fig. 3). At 7.15 p.m., two hours after version, the stillborn female child came through the placenta. The fetus and placenta together weighed 6 lb. 13 oz. The patient recovered. The total loss of blood had not been severe.

The prominent incidents of the labour were, first, the delay early in the first stage due to the bulk and area of the placenta within the obstruction zone; and, secondly, the abolition later of obstruction. During the second stage the freely perforated and damaged placenta as a girdle above the pelvic brim permitted the expulsion of the fetus.

The fetal sacrifice involved in this effective method of providing for maternal safety cannot be avoided by the alternative of cervical dilatation by the Champetier de Ribes bag. Cervical dilatation does not abolish placental obstruction and placental damage; these are potent causes of stillbirth, and their effects become vividly apparent in the specimen illustrated in Figs. 4 and 5, which establish the reality and gravity of placental obstruction and placental damage.

Low Lateral and Overlapping Placenta Praevia (Thirty-fifth Week).

A 4-para, aged 29, was admitted into the Maternity Hospital on January 2nd, 1916, at 10.30 a.m., with slight haemorrhage, which gradually increased. At 4.30 p.m. a Champetier de Ribes's bag was inserted after perforation of the membranes; when the bag was placed the separated lower third of the placenta was discovered, thickened and indurated by thrombosis (Fig. 4); it hung down, over and below the promontory in the sacral hollow, diminishing the available conjugate; the head of the fetus remained loose above the brim.

At 5.15 p.m. the cervix was fully dilated; the Champetier de Ribes bag was removed; the head was still lying loose above the brim. Bipolar version was preferable to forceps. Fetal heart then heard, 130. The thick placental mass was clearly an intra-pelvic obstruction, $1\frac{1}{2}$ in. to 1 in. in thickness. At 8.20 p.m. the dead-born male fetus (5 lb. 11 oz.) was spontaneously expelled; also the placenta, 1 lb. 5½ oz. The mother recovered.

Placental obstruction to labour is incontestable. Damage to the placenta occurs.

In the presence of placental obstruction the rupture of the membranes is itself an incomplete step in treatment, to be followed by a usually slow labour and a stillbirth. The latter, as the rule, is even to be expected when the more favourable vertex presentation has been maintained and perhaps an accelerated forceps extraction adopted.

Variations in the bulk and area of the praevial placenta and in the extent of the damage to it are compatible with variations in their effects on the destruction or preservation of fetal life during labour. Major and minor degrees of variation are clinically accessible. Intermediate degrees are likely to introduce confusion.

So far the inquiry has dealt with a viable fetus at the onset of labour. In cases of placenta praevia in which intrauterine death has preceded the onset of labour prolapse of the placenta exerts an insignificant bearing on the conduct and result of the labour.

Two examples may now briefly be alluded to as illustrations of harmless placental obstruction.

Placenta Praevia with Prolapse of the Placenta. (Two Cases.)

Case 1.—In this case the larger part of the placenta was found early in the vagina; the smaller portion still attached anteriorly within the uterus.

Bleeding and labour pains were noted at 10 a.m. on March 29th, 1911; next day the patient was admitted to hospital at 11 a.m. The loss of blood was then free and there was shoulder presentation, right dorso-anterior; internal podalic version was effected. The spontaneous expulsion of the placenta preceded the assisted delivery of the macerated male fetus, which weighed 6 lb. 6 oz.

The patient, aged 30, had had five children and one abortion. The menses had been suppressed since the end of July, 1910.

Case 2.—A multipara, aged 32, with a record of eight previous normal labours, stated that the last menstruation ceased on October 10th, 1914, and that on May 3rd, at twenty-nine and a half weeks, labour pains and bleeding commenced simultaneously at 12.30 p.m. The membranes ruptured at 2.30 p.m.; the haemorrhage gradually lessened, and at 4.45 p.m. it had practically ceased. At 6 p.m. there was almost full dilatation, and the placenta was in the vagina appearing at the vulva. At 6.20 p.m. the fetus was expelled in the membranes; its apparent age was six and a half months. There was not at any time an excessive blood loss. The rupture of the membranes is situated a little more than one inch from the margin of the placenta.

Occasional Difficulties in Diagnosis.

Fig. 6 shows an organized tongue-shaped clot continuous with the placental margin from a case of lateral placenta praevia. The fetus after version was expelled alive and survived. The value of the specimen lies in the connexions and the firmness of the clot, indistinguishable from the thrombosed placenta until the microscope had been used.

Large, Flattened out Encephalo-meningocele.

In this case the condition simulated prolapse of the placenta, and was rare in its extent and conformation. (Fig. 7.)

SUMMARY.

1. The initial haemorrhage is a warning to be taken seriously. Equipment is required, also prompt transference of the patient into a hospital or a nursing home. To quote a current war expression: it is not one man's or one woman's business to stand by whilst delay adds its dangers.

2. The viability of the fetus at or after the thirty-sixth week of gestation is acceptable; induction of premature labour has practically proved this; Caesarean section is unlikely to disprove it.

3. The bulk and area of placenta praevia in the obstruction zone can be approximately estimated by examination. This obstruction may be an important item in directing the management of the labour.

If early opportunities and complete equipments are obtainable, the three particulars I have mentioned are more consistent with maternal and fetal safety by Caesarean section than by any other method of treatment of placenta praevia. Debatable matters have developed amid the large number of Caesarean sections already published. The defects and hazards of the earlier operations have been recognized. Opposition will wane with better selection.

The present obstetrical attitude lacks neither prejudice nor proof. Caution is cherished by the lapses in opportunities and the gaps in equipments yet to be banished by an ever-increasing co-operation.

My thanks are tendered to colleagues and others of my professional friends for their gifts to the teaching equipment of my department. Dr. Hendry, the museum sub-curator, has superintended the preservation of the specimens, and Mr. J. Tenbosch, the laboratory assistant, has taken the photographs. Their efficient services are much appreciated.

THE PREVENTION OF POSTERIOR BOWING IN COMPOUND FRACTURE OF THE FEMUR.

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THOSE who have had considerable experience during the present war of gunshot wounds associated with compound fracture of the femur assert that the most difficult deformity to avoid is posterior bowing.

This is especially the case when there is a suppurating posterior wound which needs frequent dressings. Most are agreed that the best appliance for such cases is the Thomas bed knee splint with extension; in this the thigh is supported with strips of bandage slung across between the two side bars of the splint; it is attempted to correct the tendency for posterior bowing either (a) by tightening the slings under the site of fracture, or (b) by inserting a back splint and pad between the slings and the thigh, or (c) by bending the splint opposite the knee.

In method (a) every time the posterior wound is dressed the bandage slings have to be removed and fresh ones inserted; each step in this procedure, if performed properly, requires special care, is tedious, makes the dressing of the case long, and even when conscientiously done often fails to prevent the occurrence of the backward deformity.

Method (b) is open to the same objections, and, further, the pads and back splint tend to move; the results seen after treatment by this method are, however, more satisfactory than by (a).

Method (c), if one may judge by some of the after-results seen at Alder Hey Hospital, does not always do all that some have claimed for it to correct the deformity.

FIG. 1.—Full term central placenta praevia. The dark shading denotes the increased area and distribution of the placenta. (Reduced.)

FIGS. 4 AND 5.—Low lateral and overlapping placenta praevia. Fig. 4 shows the lower third of the placenta, thickened and indurated by thrombosis. (Reduced.)

FIG. 2.—Central placenta praevia at full term. The uterus laid open to display placenta and fetus after version. (Reduced.)

FIG. 6.—Showing a tongue-shaped clot continuous with the placental margin. From a case of lateral placenta praevia. (Reduced.)

FIG. 3.—Dead fetus; death due to placental obstruction and placental damage incurred during labour. (Reduced.)

FIG. 7.—Large, flattened out encephalo-meningocele. (Reduced.)