

PLACENTA PRÆVIA AND ITS TREATMENT<sup>1</sup>

BY PROFESSOR DOCTOR W. NAGEL, BERLIN, GERMANY

Honorary Fellow of the American Gynecological Society and the Obstetrical Society in Edinburgh

IT once seemed that with the introduction of version by the Braxton-Hicks method the last word had been said in the treatment of placenta prævia. With this method the Berlin school, as represented by Gusserow and Schroeder achieved such remarkably favorable results as compared with the older method—viz., tamponade of the vagina until complete dilatation of the os, then version and extraction, or in cases of impaction of the foetal head, forceps—that it soon became the dominating one in Germany. Hofmeier<sup>2</sup> in Schroeder's Clinic had but one maternal death out of 37 cases, Behm<sup>3</sup> in Gusserow's Clinic had 35 cases and no death. Later, Zweifel published 62, Wegelins 16 and Hauck 18 cases, all three also without any maternal mortality. Döderlein<sup>1</sup> gives the average maternal mortality at 7.8 per cent, and the infant mortality at 73.7 per cent. This latter figure is unfavorable as compared with the average infant mortality of 54.12 per cent under the older method.

It is unjust to attribute the high infant mortality to the treatment used, as in most cases of placenta prævia we have to deal with immature children whose vitality has been

lowered by disturbances of the foetal circulation during labor, as a result of the unavoidable separation of the placenta. Even though these facts were apparent, the high infant mortality gave rise to a number of methods, partly based on the older methods, partly innovations. These methods I shall briefly describe.

1. *Abdominal cesarean section.* With an early diagnosis, good aseptic conditions, and a living child, the result must be a favorable one, and published reports show this to be so.

In the above-mentioned paper by Döderlein, we find a large number of cases: Krönig (35), Sellheim (8), Parker Davis (7), Recaseus (4) with no maternal mortality and an infant mortality of 0 (Sellheim) to 42.86 per cent. The average amounted to 8.9 per cent maternal and 33 per cent infant mortality. Cæsarean section will, however, never be practicable in routine cases and Döderlein has even curtailed its use in hospital and clinical practice and gives as contra-indications: (1) infection from the patient herself; (2) fever, (3) examinations made by physicians and midwives before admission to the hospital, (4) tamponade, (5) extensive hæmorrhages, (6) marginal insertion of placenta (because in this case the patient can be confined in a simple manner), (7) in cases where foetus is

<sup>2</sup> M. Hofmeier, Ztschr. f. Geburtsh. u. Gynäk., viii.

Behm, Ztschr. f. Geburtsh. u. Gynäk., ix.

Döderlein, Internat. Med. Cong., Lond., 1913.

<sup>1</sup> An extract of this paper was read in the discussion on placenta prævia in Section VIII of the Seventeenth International Congress of Medicine, London, 1913.

either dead or not viable (amounting to about 50 per cent in hospital cases of placenta prævia). After eliminating these cases, very few remain for cæsarean section.

In desperate cases cæsarean section may be the only available method. Webster<sup>1</sup> reports a case in a girl 14 years of age, with copious hæmorrhages, infantile vagina and narrow pelvis, in which he operated successfully for the mother.

The modification of the classical cæsarean section.

2. *The extraperitoneal cæsarean section* is recommended by Sellheim in aseptic cases with living child and no great hæmorrhage. But even in such cases extraperitoneal cæsarean section cannot be said to offer good prospects inasmuch as the incision is made through the maternal portion of placenta with its enormous sinuses. Hofmeier contends that the vascularity at this point is no greater than that of any other part of the uterus. That this view does not agree with the anatomical facts, I have shown at the International Congress at London in 1913. Hofmeier's view has been obtained through examination of poorly injected specimens.

3. *Vaginal cæsarean section* is Dürrssen's modification of "accouchement forcé," as practiced by French obstetricians of the seventeenth century, by Guillemeau and Mauriceau in cases of hæmorrhage during pregnancy. Both the accouchement forcé and vaginal cæsarean section, have the disadvantage that the incision is made through the placental site by reason of which large maternal vessels are opened. As the incision is made in the interest of the child, extraction must be rapid, and in consequence and favored by the spongy nature of the tissues of the lower uterine segment, the incision is enlarged by tearing, so that we have enormous hæmorrhages to contend with after the extraction of the child. The placenta must be rapidly removed so that the incision and the tears can be quickly sutured. The suturing is unusually difficult, the cut and torn edges cannot be held by volsellas as the latter tear out when downward traction is made on them, the extensive bleeding meanwhile

making orientation impossible. Furthermore, the hurried removal of the placenta tends to cause atony of the uterus, which encourages severe bleeding, much to the damage of the already greatly depleted patient.

The results, therefore, were bad and former advocates of the method such as Bumm and Krönig, now warn against it.

It is significant that even Dürrssen, the one who originated the method, has modified it in cases of placenta prævia and extends the cervical incisions only so far that the metreurynter can be introduced into the cavity of the uterus. The uterus also must not be pulled down, Dürrssen says, but should simply be fixed to prevent separation of placenta.

In remarkable contrast to the bad experiences of other operators are the results given by Döderlein's Clinic, 34 vaginal cæsarean sections with one death.<sup>2</sup> In Döderlein's compilation at the International Congress, London, we find 88 cases with 9 maternal deaths, 3 of the children were stillborn and 44 not viable. According to Döderlein, the total mortality of the mothers was 11.3 per cent, of children 21.7 per cent.

4. *Metreuryxis*. Originally a rubber bag (Barnes, Keiller) was introduced into the cervical canal below the amniotic cavity, and then filled. Its object was to check bleeding and induce pains. The effect as far as pains are concerned is very uncertain and the introduction of the bag between amniotic cavity and uterine wall certainly causes a further detachment of the placenta, as is evidenced by the bleeding which follows the removal of the bag. Dürrssen modified the procedure by introducing the bag into the amniotic cavity after the membranes had been ruptured or the placenta (in case of central insertion) perforated. The intra-amniotic metreuryxis will check the bleeding as surely as the bringing down of the foot, but it will cause circular compression of placenta. The most practical of the bags for this purpose is that of Champetier de Ribes, as it is made of non-elastic material and can be filled to "its fullest capacity." Traction can be made on the tube by means

<sup>1</sup>J. Clarence Webster Textbook of Obstetrics, 1903.

<sup>2</sup>Seitz Arch. f. Gynäk., Bd. 99.

of a cord, passed over the edge of the bed, and to which has been attached a small weight, such as an empty bottle.

It is necessary to perform version immediately after expulsion of the bag; i. e., if the presenting part has not already entered the cervix, which latter is generally not the case as the bag has a tendency to displace the fœtus. If the largest sized bag (with a diameter of 10 cm. at its base) has been used, the cervix is now dilated to such an extent that extraction can be made immediately. Herein lies the advantage of intra-amnial metreuryesis, and one can expect, therefore, a lower mortality among the children. In fact, Dührssen had very good results in his first 6 cases — 5 living children. Later authors were not so fortunate: Leopold reports 11 cases with 5 living and 6 dead children. Zweifel could see no advantage in this method as far as either control of bleeding or the rapid dilatation of the os was concerned. According to the compilation of Döderlein, given conditionally, the mortality of mothers is 6.5 per cent, of children 45.4 per cent. It is clear that the prospects of the child are dependent to a large extent upon the area of compression made upon the placenta by the bag. If a large part of the placental circulation is disturbed, the child is in jeopardy without any chance of hastening its delivery, and the advantages gained by introduction of the bag are lost. Added to this, experience has shown that the bag should only be allowed to remain a short time (four to six hours according to Leopold), as the injuries to the cervical tissue increase the danger of septic infection.

In spite of this, metreuryesis in view of the lower infant mortality and nearly equal mother mortality, will continue to have its advocates, but will not supplant combined version, as the bringing down of the foot is not a difficult procedure and does not take a longer time than the introduction of a bag.

5. *Vaginal tamponade.* Before the introduction of Braxton-Hicks version, vaginal tamponade was in Germany the prevailing method. As soon as bleeding began, the vagina was packed with tampons of cotton or gauze, or instead of this, Braun's colpeurynter was introduced and filled to its fullest

extent. The object of the tamponade was to check bleeding and also to induce labor pains. The tamponade was continued until the os was dilated to such an extent that version and extraction were possible. If the hæmorrhage had in the meantime ceased, by reason of the descent of the head, and with the mother and child in good condition, things were left to nature, or extraction made by forceps. It often took a long time before pains commenced and it was necessary to frequently renew the tampons.

As a result, the patient continued to bleed and was often enough infected, as this method was used in the pre-antiseptic era. In the absence of reliable statistics, it is sufficient to say that the morbidity and mortality of mothers were very high during this period.

With our present-day method it is possible to prevent infection to a certain extent, but not entirely, as reports from various authors will show. Winckel had a maternal mortality of 5.2 per cent. In cases of placenta prævia where the tampon was employed, fever followed, according to Freund in 60 per cent, Winter 80 per cent, Sellheim 60 per cent, Friggesi 23.5 per cent, during the puerperium.

Vaginal tamponade, in the form of kolpeuryesis, by which the danger of infection is lessened, has again come in favor and is recommended by Zweifel, Hammerschlag and Tauffer in cases of hæmorrhage during pregnancy and at the beginning of labor. I consider the tamponade with iodoform gauze or kolpeurynter as applicable in cases of hæmorrhage during pregnancy as a temporary measure and in the first stage of labor (except in cases of placenta prævia centralis) if there be a cephalic presentation that is allowed to proceed normally. As soon as the os is sufficiently dilated the membranes must be ruptured.

6. *Braxton-Hicks method.* Many well-known obstetricians demand that all cases of placenta prævia should be transferred to hospitals and treated preferably by cæsarean section. Desirable as it may be, the demand that all cases be thus treated is impracticable, as but a small percentage of physicians and patients have a hospital at their disposal. As far as cæsarean section is concerned, the

brilliant results of some operators are only apparently so. With the restrictions placed by Döderlein upon this operation (see above), any of the other methods would show equally good results. The practitioner must have at his command a method that can be employed at the home of the patient, and the best, that of Braxton-Hicks, will meet this requirement in most cases. In support of my opinion, I call attention to fifty consecutive cases, which I treated when obstetrician to the policlinic department of the Royal Charité at Berlin. I have never published these cases, as the attention of obstetricians had meanwhile turned to other things. But at the present time, with the Braxton-Hicks method again in the foreground and with the publication of statistics from other obstetrical clinics, my cases demand a certain amount of interest, not only on account of their number and that they were all treated along fixed lines, but from the fact that the cases were all treated (and brought to a close) in the homes of the poorer population of Berlin — and represent the work of one operator, myself.

Two deaths from acute anæmia, due to long continued previous hæmorrhages, occurred during the beginning of my career as assistant. After insisting upon being called to each and every case of bleeding during pregnancy, I was enabled to make an early diagnosis of placenta prævia, and in consequence conditions changed. In the next 44 successive cases there were no deaths from hæmorrhage. The results in my private practice have been equally good, but I wish to confine myself to policlinic cases entirely, as I intend to show that the prognosis with the Braxton-Hicks method even in most unfavorable surroundings is as good, as far as the mother is concerned, as cæsarean section under the most auspicious conditions.

My cases will show that in spite of primitive conditions asepsis was always carried through, as none of my cases died of sepsis. It is a pity that there is a tendency manifesting itself to place asepsis after technique, and, therefore, it seemed necessary to disclose that success in the first place is dependent upon *asepsis*. Above all I consider the advice, that in "urgent" cases one should

disregard disinfection entirely and go right on with the operation, as condemnable.

My experience has been that even in "urgent" cases there is *always* time for disinfection; and again, of what benefit is even the most skillful operation to the patient if a fatal sepsis follows? Nowadays we would make use of rubber gloves. My cases date back to a time when gloves were not known, but the results show that the hands can be made germ-free, particularly if contact with infectious material is avoided.

I give a review of my cases in the following table and should like to point out some details.

Among the fifty mothers, four were primiparæ and 46 multiparæ. Twenty-six times the labor set in at full term and 24 times prematurely. Twice the placenta prævia was of the marginal form, twenty times it was central and twenty-eight times lateral. Forty-six times the head-presentation, nine times the transverse position, four times the foot- and once the breech-presentation prevailed. I have performed the combined (bipolar) version in thirty-eight cases (once twins), four times the internal version. In the five cases of pelvic presentation I pulled down the foot. In three cases of vertex presentation it was sufficient to rupture the membranes, after which the head descended deeply into the pelvis.

After I had brought down the foot, labor was mostly left to nature. Only in 3 cases of internal and 7 cases of bipolar version the fœtus was extracted when the external os was fully dilated. I found, before I began the treatment, a rising temperature and a frequent pulse in four cases. In spite of that the puerperium was normal in those cases.

The *third stage* completed 44 times a normal course, and the placenta was after its spontaneous separation easily expressed through Credé's method. In 8 of these 44 cases a more or less pronounced atony took place before or after the expulsion of the placenta, which was successfully treated by gentle massaging. The removal of the placenta by intra-uterine manipulations was necessary in 6 cases on account of profuse hæmorrhage. In the 48 surviving cases the puerperium took 40 times a normal course; 8 times occurred in the first

days of the puerperium a rise of temperature up to 40° C., partly complicated with foul-smelling discharge. In those cases the uterine cavity was always douched thoroughly with a one-half per cent solution of lysoform and all patients recovered.

Sixteen of the children were born alive while 35 of them were still-born (two of them being twins). In 10 cases the fœtus died during labor; 23 of the 35 still-born were immature.

Concerning the technique, I performed bipolar version as early as possible, when only one or two fingers could be admitted through the os, and brought down a foot. I placed a loop around same and left the case to nature.

As long as the liquor amnii has not escaped and the fœtus is movable the operation is by no means difficult.

When the placenta covered the os completely, I burrowed the fingers right through it into the amniotic cavity. The perforation of the villi and chorionic membrane is not difficult, but the perforation of the amnion sometimes proves so, which can be avoided by pressing the presenting part with the abdominal hand against the pelvic brim, while at the same time the vaginal fingers rub gently the membrane upon the presenting part until it tears. I grasp the first obtainable foot, no matter if it is the anterior or posterior one, and bring it down into the vagina chiefly by means of the abdominal hand; namely, in the beginning of the first stage will the abdominal wall and the uterus through anæsthesia relax to such extent that the abdominal hand can push the foot, so to speak, through the os, whereupon it can be seized between the thumb and index of the vaginal hand. How far the foot can be pulled down into the vagina depends upon the dilatation of the os. It would, for instance, be a mistake to try to pull the breech immediately into the pelvic brim without considering the size of the os. Otherwise severe laceration of the cervix and hæmorrhage would occur, which would be blamed upon the method. By partially dilated os, the leg must not be pulled down further than to above the knee, which will be sufficient to check bleeding. Should any hæmorrhage occur, when the os

has become more dilated, the foot may be drawn slowly until plugging again is complete; after this the expelling of the fœtus is once more left to natural forces. An extraction is only then justified when the os is fully dilated and the child still alive.

No. 1, Journal No. 934, February 26, 1888; Name, D; Age 39; XI para (abortions included); presentation of fœtus, II. Vertex, placenta prævia lateral, dext.; labor, last menstruation: middle of August, 1887. Periodical bleeding during last two months. Profuse bleeding for five hours. Very anæmic. Temp. 38.2. Pulse 120. Prolapse of weak pulsating cord. Os almost fully dilated. Bleeding stopped after version is completed. Slow extraction of fœtus. Placenta bimanually removed; operation, internal version and extraction; child, male, dead, immature (seventh month); puerperium, normal.

No. 2, Journal No. 941, February 28, 1888; Name Sch; Age 35; XIII para (abortions included); presentation of fœtus, vertex, placenta prævia totalis; labor, last menstruation: June, 1887. Hæmorrhage for five days. Profuse bleeding for five hours. Very anæmic, fainting. Os dilated to the size of one-half dollar. Hydramnion. Two fingers through the placenta. Child dead. After version bleeding stopped. Two hours later fœtus expelled. Placenta spontaneously in two pieces without hæmorrhage; operation, combined version; child, male, dead, mature; puerperium, normal.

No. 3, Journal No. 951, March 12, 1888; Name, J; Age 7; V para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia lateral sinistra; labor, came to me with history of hæmorrhage for three weeks. Vagina plugged for the last eight days. For five hours strong pains with profuse hæmorrhage; extremely anæmic. Prolapse of weak pulsating cord. Os size of a dollar. After version no bleeding, two hours later fœtus expelled. Placenta born without bleeding; operation, combined version; child, male, dead; puerperium, patient died three hours later from exsanguination.

No. 4, Journal No. 82, May 3, 1888; Name, D; Age 24; VII para (abortions included); presentation of fœtus, I. Transverse position. Placenta prævia lateral, sinistra; labor, profuse hæmorrhage for three hours. Membranes ruptured five hours. Prolapse of pulseless cord and right arm. Os size of dollar. After version no bleeding; pains strong, fœtus expelled shortly after; delivery of head. Placenta without bleeding; operation, combined version; child, female, dead; puerperium, normal.

No. 5, Journal No. 95, May 7, 1888; Name, K; Age ?; II para (abortions included); presentation of fœtus, I. Transverse position. Placenta prævia central; labor, last menstruation: beginning of September, 1887. Slight bleeding for few days. On May 7th strong pains set in with profuse hæmorrhage. Os admitted two fingers. After version

no bleeding. Three hours later foetus extracted and expressed by fully dilated os. Placenta without bleeding; operation, combined version, extraction; child, male, dead, immature; puerperium, normal.

No. 6, Journal No. 154, May 28, 1888; Name, P; Age 39; VII para; presentation of foetus, II. Foot presentation. Placenta prævia lateral, dextr.; labor, last menstruation: middle of October, 1887. Severe bleeding for twelve hours. Temp. 38.5. Pulse 90. Os size of one-half dollar. Left foot pulled down until bleeding stopped. Six hours later os fully dilated. Foetal sounds still to be heard; therefore, extraction. Placenta without bleeding, slight atony p.p.; operation, pulled down a foot. Extraction; child, male, dead, immature; puerperium, normal.

No. 7, Journal No. 200, June 15, 1888; name, J; Age 33; VII para (abortions included); presentation of foetus, I. Vertex. Placenta prævia lateral. Sinister; labor, last menstruation: November 16, 1887. Periodical bleedings for four weeks. Pains and hæmorrhage for twelve hours. Os size of quarter. Bleeding stopped after version. Foetus spontaneously expelled soon after; operation, combined version; child, male, living, length 42 cm. Circumference of head, 32 cm. (died three hours later); puerperium, normal.

No. 8, Journal No. 273, July 14, 1888; Name, M; Age, 18; I para (abortions included); presentation of foetus, I. Vertex, placenta prævia, later, sinistra; labor, last menstruation: beginning of December, 1887. Profuse bleeding for two days, very anæmic. Strong hæmorrhage and collapse during version. Foetus expelled two hours later. Placenta bimanually removed. Packing of uterus and vagina. Bleeding checked; operation, combined version; child, male, dead, immature; puerperium, patient died two hours later from exsanguination.

No. 9; Journal No. 288, July 19, 1888; Name B; Age 30; VII para (abortions included); presentation of foetus, I. Vertex. Placenta prævia, centralis; labor, last menstruation: beginning of November, 1887. The morning of July 19 suddenly profuse bleeding, os admits one finger. Hydramnion: bleeding stopped after version. Foetus expelled four hours later. Operation, combined version; child, female, dead, mature; puerperium, normal.

No. 10, Journal No. 316, July 28, 1888; Name W; Age 25; III para (abortions included); presentation of foetus, II. Foot presentation, placenta prævia margin, sinister; labor came to me with temp. 38. Pulse 104. Profuse bleeding when os fully dilated. After labor slight atony; operation, extraction; child, female, living, mature; puerperium, normal.

No. 11; Journal No. 320, July 28, 1888; Name L; Age 30; II para (abortions included); presentation of foetus, II. Vertex, placenta prævia later, sinister; labor, last menstruation: end of November, 1887. Profuse periodical bleeding for six hours; pains slight. Os admits two fingers. Bleeding stopped after version. Foetus expelled twelve hours later; operation, combined version; child, male, dead, mature; puerperium, normal.

No. 12; Journal No. 326, July 30, 1888; Name B; Age 30; XI para (abortions included); presentation of foetus, II. Vertex, placenta prævia, central; labor, last menstruation: December 4, 1887. Profuse hæmorrhage. Os almost fully dilated, covered with placenta. Went through placenta, performed version and extraction. Placenta bimanually removed; operation, internal version, extraction; child, male, dead, immature; puerperium, temp., first day, 36.5; second day, 38; third day, 40.1. Pulse 140. (Uterine cavity washed out.) Evening temp. 39. Fourth day, 38; fifth day, 36.9. Temp. remained normal. Recovery.

No. 13; Journal No. 419, September 1, 1888; Name, R; Age 39; IV para; presentation of foetus, II. Vertex. Placenta prævia centralis; labor, last menstruation: middle December 1887, severe bleeding for four hours. Os size of dollar. No bleeding after version. Foetus expelled seven hours later. Arms and head artificially delivered. Placenta without bleeding; operation, combined version; child, female, living, mature; puerperium, normal.

No. 14; Journal No. 466, September 25, 1888; Name, K; Age 31; VII para (abortions included); presentation of foetus, II. Vertex. Placenta prævia lateral, sinister; labor, last menstruation: beginning of January. Two hours ago very profuse bleeding, so that she fainted. Very anæmic. Os size of a dollar. Bleeding stopped after version; foetus expelled few hours later; operation, combined version; child, female, dead, immature; puerperium, normal.

No. 15; Journal No. 378, October 14, 1889; Name, G; Age 20; I para (abortions included); presentation of foetus, transverse position. Placenta prævia centralis; labor, last menstruation: beginning of March. Profuse bleeding for some hours. After version no bleeding. Foetus expelled three hours later. Placenta spontaneous one-half hour later without bleeding; operation, combined version; child, female, living, immature (died the following day); puerperium, normal.

No. 16; Journal No. 385, October 29, 1889; Name, Sch; Age 27; III para (abortions included); presentation of I. Vertex. Placenta prævia later, sinister; labor, last menstruation: January. For three hours severe bleeding. Anæmic. Os size of half dollar. After version no bleeding; foetus expelled one and one-half hours later. Placenta spontaneous without bleeding; operation, combined version; child, female, dead, mature; puerperium, normal.

No. 17; Journal No. 400; October 29, 1889; Name, Sch; Age 38; X para (abortions included); presentation of foetus, vertex. Placenta prævia later, sinister; labor, last menstruation: end of February. Severe bleeding. Twins. After extraction of children atonic bleeding. Placenta bimanually removed. Uterus hereafter firmly contracted and no bleeding; operation, combined version and extraction; children, females, both dead, length 30 cm.; puerperium, normal.

No. 18; Journal No. 415, November 5, 1889; Name W; Age 37; XI para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia, marg. sinister.; labor, last menstruation: December, 1888. Profuse bleeding for two hours. Liquor amnii escaped. Os lets the hand through. Child dead. Bleeding stopped after version. Placenta spontaneous expelled one-half hour later without bleeding. Piece of membranes removed; operation, internal version and slow extraction; child, female, dead; puerperium, normal.

No. 19; Journal No. 433; November 15, 1889; Name Sp; Age 29; III para (abortions included); presentation of fœtus, II. Incomplete foot presentation. Placenta prævia, lateralis; labor, last menstruation: end of March. Moderate bleeding; prolapse of posterior left leg. Os twice the size of a dollar. Left foot pulled down, which rotated in front under strong pains. No bleeding after breech entered pelvis. Third state without bleeding; operation, pulled down a foot; child, female, dead, length 43 cm.; puerperium, normal.

No. 20; Journal No. 453, November 25, 1889; Name H; Age 41; XI para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia centralis; labor, last menstruation: April 21. Bleeding for last 20-24 hours. Hæmorrhage with every pain. Fœtus dead. Os size of dollar, covered all over with placenta. Went through the placenta. Fœtus slowly extracted. Placenta expelled shortly after without bleeding; operation, combined version, extraction; child, male, dead, immature; puerperium, normal.

No. 21; Journal No. 460, November 29, 1889; Name H; Age 25; IV para (abortions included); presentation of fœtus, I. Transverse presentation. Placenta prævia lateral dextr.; labor, last menstruation: beginning of March, bleeding for five hours. Liquor amnii escaped. Os size of quarter. Bleeding stopped after version. Fœtus expelled two hours later. Placenta delivered without bleeding; operation, combined version; child, female, living; puerperium, normal.

No. 22; Journal No. 465, November 30, 1889; Name L; Age 22; II para (abortions included); presentation of fœtus, II. Vertex. Placenta-prævia lateral, sinister.; labor, last menstruation: March 13. Bleeding for fourteen days; very profuse for two hours. Very anæmic. Os admitted two fingers. After version no bleeding. Fœtus expelled four hours later. Collapse after child is born. Placenta expressed; operation, combined version; child, female, living, length 47 cm.; puerperium, normal.

No. 23; Journal No. 521, December 27, 1889; Name D; Age 25; I para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia lateral, sinister.; labor, last menstruation: May 1st. Bleeding with pains for eight hours. Os size of quarter. No bleeding after version. Fœtus expelled three hours later. Placenta delivered without bleeding; operation, combined version; child, male, dead, length 46 cm.; puerperium, normal.

No. 24; Journal No. 531, January 1, 1890; Name H; Age 22; II para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia lateral, sinister.; labor; last menstruation: May 4th. Severe hæmorrhage for two hours. Temp. 39.5. Pulse 100. Fœtal sound 180. Os size of dollar. Bleeding stopped after version. Fœtus expelled four hours later. Placenta without bleeding; operation, combined version; child, female, dead, immature; puerperium, normal.

No. 25; Journal No. 575, January 20, 1890; Name Sch; Age 36; XIII para (abortions included); presentation of fœtus, II. Transverse position. Placenta prævia total; labor, last menstruation: end of June. Bleeding for several hours. Anæmic. Os size of dollar. After version no bleeding. Fœtus expelled two and one-half hours later. Placenta without bleeding; operation, combined version; child, female, dead, immature; puerperium, normal.

No. 26; Journal No. 611, February 6, 1890; Name F; Age 28; VI para (abortions included); presentation of fœtus, II. Transverse position. Placenta prævia lateral, sinister.; labor, last menstruation: not known. Profuse bleeding for four hours. Os admitted one finger. After version no bleeding. Fœtus expelled three hours later. Placenta without bleeding; operation, combined version; child, female, dead, immature (eighth month); puerperium, normal.

No. 27; Journal No. 637, February 12, 1890; Name B; Age 38; IX para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia later, sinister.; labor, last menstruation: December 6, 1889. Profuse bleeding for six hours. Os size of dollar. Strong pains. Head engaged in pelvic brim. Bleeding stopped after membranes ruptured. Fœtus expelled three hours later. Placenta without bleeding. Patient collapsed soon after but rallied; operation, ruptured membranes; child, female, living; puerperium, normal.

No. 28; Journal No. 721, March 14, 1890; Name M; Age 39; XI para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia centralis; labor, last menstruation: August 15, 1889. Severe bleeding for some hours. Os size of quarter. After version no bleeding. Fœtus expelled two hours later. Placenta without bleeding; operation, combined version; child, male, dead, length 42 cm.; puerperium, normal.

No. 29; Journal No. 2, April 1, 1890; Name R; Age 43; XI para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia centralis; last menstruation: July 23, 1889. Severe bleeding for hours. Os size of quarter. No fœtal sounds heard. Bleeding stopped after version. Fœtus expelled one and one-half hours later. Placenta without bleeding; operation, combined version; child, female, dead, immature; puerperium, normal.

No. 30; Journal No. 21, April 10, 1890; Name Sch; Age 37; VIII para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia lateralis; labor, last menstruation: beginning of August, 1889.

Severe bleeding for two hours. Os admitted two fingers. Bleeding stopped after version. Fœtal sounds good. Fœtus expelled two hours later. Placenta with slight bleeding; operation, combined version; child, male, living, mature; puerperium, normal.

No. 31; Journal No. 59, April 23, 1890; Name Sch; Age 25; VI para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia centralis; labor, last menstruation: August 12, 89. Slight bleeding during last three days. Severe bleeding for two hours. Anæmic. Fœtus dead. Os size of dollar. No bleeding after version. Strong pains. Fœtus expelled one-half hour later. Placenta with slight bleeding; operation, combined version; child, female, dead, mature; puerperium, from the third to the sixth day foul smelling discharge and rise of temperature. Intra-uterine douching. Recovery.

No. 32; Journal No. 73, April 27, 1890; Name K; Age 32; II para (abortions included); presentation of fœtus, vertex. Placenta prævia lateral, sinister.; labor, last menstruation: end of September, 1889. Severe bleeding for last two hours. Liquor amnii escaped ten hours ago. Os admitted two fingers. Bleeding stopped after version. Fœtus expelled under strong pains three hours later. In the third stage severe bleeding, due to atony. Placenta expelled; operation, combined version; child, female, dead, immature; puerperium, normal.

No. 33; Journal No. 72, April 29, 1890; Name T; Age 34; VIII para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia later. dextr.; labor, last menstruation: July 24, 1889. Slight periodical bleeding during last four weeks. Pains began last night with severe hæmorrhage. Os admitted two fingers. No bleeding after version. Strong pains. Fœtus expelled four hours later, asphyctic but rallied. Profuse hæmorrhage in third stage. Placenta bimanually removed; operation, combined version; child, male, living, mature; puerperium, normal.

No. 34; Journal No. 95, May 6, 1890; Name B; Age 31; III para (abortions included); presentation of fœtus, vertex. Placenta prævia centralis; labor, last menstruation: end of August, 89. Periodical bleeding during last four weeks. Continual slight bleeding for a week. Os size of dollar. No bleeding after version. Fœtus expelled under strong pains; one-half hour later; head delivered. Placenta without bleeding; operation, combined version; child, female, living, length 45 cm.; circumference of head 32 cm.; puerperium, normal.

No. 35; Journal No. 245, July 4, 1890; Name B; Age 35; IX para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia centralis; labor, last menstruation: October, 1889. Bleeding in intervals during last week. Slight pains. Profuse bleeding after internal examination. Os size of half dollar. No bleeding after version. Fœtus expelled three hours later. Slight atony in the third stage; operation, combined version; child, female, living; puerperium, normal.

No. 36; Journal No. 247, July 6, 1890; Name Tr.; Age 30; IV para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia centralis; labor, last menstruation: September 31, 1889. Bleeding for first time three weeks ago. Periodically severe bleeding for some hours and during examination. Os size of half dollar. Abundant liquor amnii. Bleeding stopped after version. During expulsion of fœtus repeated hæmorrhage. Extraction of fœtus by almost fully dilated os. Atony during third stage; operation, combined version; child, male, dead, length 50 cm.; puerperium, patient very anæmic. On the fourth day rise of temperature and foul-smelling discharge. Transportation to clinic. Recovery.

No. 37; Journal No. 268, July 16, 1890; Name L; Age 30; IV para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia lateral. dextr.; labor, last menstruation: middle of December. Bleeding at intervals for some days, especially during pains, that day I was called. Os size of dollar. No bleeding after version. Placenta expelled immediately after fœtus; operation, combined version; child, female, dead, immature; puerperium, normal.

No. 38; Journal No. 297, July 28, 1890; Name K; Age 41; IV para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia centralis; labor, last menstruation: not known. Hæmorrhage for twelve hours. Os size of dollar. No bleeding after version. Fœtus expelled an hour later. Placenta without bleeding one-half hour after expulsion of fœtus; operation, combined version; child, male, dead, mature, length 53 cm.; puerperium, normal.

No. 39; Journal No. 395, September 9, 1890; Name K; Age ?; XI para; presentation of fœtus, II. Vertex. Placenta prævia lateral, sinister.; labor, last menstruation: beginning of January. Bleeding since yesterday; bleeding for some hours so severe that midwife ruptured the membranes. Very anæmic. Os size of dollar. Bleeding stopped after version. Fœtus expelled one hour later. Placenta bimanually removed. Atony; operation, combined version; child, male, living, length 54 cm.; circumference of head 36 cm.; puerperium, normal.

No. 40; Journal No. 414, September 16, 1890; Name M; Age 31; VI para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia centralis; labor, last menstruation: middle of December, 1889. During early months of pregnancy several times bleeding and threatening abortion. Bleeding at intervals for six hours; at my arrival profuse hæmorrhage, os size of dollar. No bleeding after version. No fœtal sounds to be heard. Fœtus expelled two hours later. Placenta three-quarters of an hour after expulsion of fœtus with slight hæmorrhage; operation, combined version: child, female, dead, length 50 cm.; circ. of head 34 cm.; puerperium, slight atony during first days, recovery.

No. 41; Journal No. 537, November 18, 1891; Name G; Age 30; I para (abortions included); presentation of fœtus, I. Foot presentation. Placenta prævia lateral. sinister.; labor, last menstruation:



beginning of May, 1891. Liquor amnii escaped three days ago, since then slight bleeding at intervals, strong bleeding at arrival. Temperature rising for last twelve hours, now temperature 38.4 Cels. Pulse 140. Os size of a quarter. Fœtus expelled four hours later. Placenta without bleeding; operation, pulled down a foot; child, male, dead, immature; puerperium, shortly after labor, temperature 38.1. Pulse 116. Recovery.

No. 42; Journal No. 550, November 23, 1891; Name B; Age 36; VIII para (abortions included); presentation of fœtus, II. Vertex. Placenta prævia centralis; labor, last menstruation: middle of March. Severe bleeding for several hours. Very anæmic. Os twice the size of a dollar. Membranes not ruptured. Internal version through the placenta. Child dead, and expelled one-half hour later. No bleeding after version. Placenta without bleeding; operation, internal version; child, female, mature; puerperium, on the fifth day, temperature 38.2. Pulse 122, then normal.

No. 43; Journal No. 598, December 12, 1891; Name Sch; Age ?; VI para (abortions included); presentation of fœtus, II. breech presentation. Placenta prævia centralis; labor, last menstruation: beginning of March; during last weeks periodical bleeding. Profuse hæmorrhage four hours ago. Os size of a quarter. During expulsion of fœtus bleeding several times, fœtus born six hours later. Slight atony after expulsion of placenta; operation, pulled down a foot; child, female, dead, length 51 cm.; puerperium normal.

No. 44; Journal No. 666, January 6, 1892; Name Sch; Age 27; IV para (abortions included); presentation of fœtus, I. Transverse position. Placenta prævia lateralis; labor, last menstruation: uncertain. Periodical bleeding for several days with slight pains. Severe bleeding for few hours. Os size of dollar. No bleeding after version. Fœtus expelled two hours later. Placenta without bleeding; operation, combined version; child, male, dead, length 45 cm., immature; puerperium, normal.

No. 45; Journal No. 684; Name A; Age 34; VI para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia lateral; labor, last menstruation: uncertain. Severe bleeding for some hours. Anæmic. Os size of dollar. No bleeding after version, fœtus expelled until appearance of breech in pelvic outlet few hours later. As fœtal sounds to be heard, manual delivery of arms and head. Slight atony in third stage; operation, combined version. Delivered arms and head; child, female, living, length 45 cm.; puerperium, normal.

No. 46; Journal No. 732; Name F; Age 27; III para (abortions included); presentation of fœtus, I. Transverse position. Placenta prævia total; labor,

last menstruation: August, 1891. Slight periodical bleeding during last six days. Os size of half dollar. After version no bleeding, fœtus expelled four hours later. Placenta without bleeding; operation, combined version; child, male, living, immature; puerperium, on the third day, temperature 38.7. Pulse 120; fourth day, temperature 37.3. Pulse 100. Recovery.

No. 47; Journal No. 755, February 19, 1892; Name Sch; Age 35; IV para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia later. dextr.; labor, last menstruation: June, 1891. Severe bleeding at intervals during last hours. Anæmic. Os size of one-half dollar. No bleeding after version. Fœtus expelled six hours later. Placenta without bleeding; operation, combined version; child, female, immature (seventh month); puerperium, normal.

No. 48; Journal No. 758, February 20, 1892; Name Pf; Age 23; II para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia lateral; labor, last menstruation: beginning of June, 1891. Periodical hæmorrhages during last five hours, at first severe. Strong pains. Os almost fully dilated. Head in pelvic inlet. After rupture of membranes head descended and bleeding stopped. Fœtus expelled shortly after. Placenta without bleeding; operation, membranes; child, male, living, length 45 cm.; circ. of head 31 cm.; puerperium, normal.

No. 49; Journal No. 769 February 24, 1892; Name K; Age 29; V para (abortions included); presentation of fœtus, I. Transverse position. Placenta prævia centralis; labor, last menstruation: July, 1891. Bleeding February 18th and 23d. Slight pains, slight hæmorrhage. Os size of one-half dollar, and covered with placenta. No bleeding after version, no fœtal sounds. Fœtus expelled one-half hour later. After expression of placenta slight atony; operation, combined version; child, male, dead, length 43 cm.; puerperium, normal.

No. 50; Journal No. 790, February 29, 1892; Name M; Age 34; VIII para (abortions included); presentation of fœtus, I. Vertex. Placenta prævia lateral, sinister.; labor, last menstruation: May, 1891. Two days ago hæmorrhage with slight pains, for eight hours hæmorrhage at intervals. Temperature 37 C. Pulse 100. Slight anæmia. Strong pains for one-half hour. Os size of dollar. Head in pelvic inlet. No bleeding after rupture of membranes and head descended quickly. Fœtus expelled one hour later. Placenta without bleeding; operation, ruptured membranes; child, female, living; puerperium, on the third and seventh days temperature 40.3 C. Foul-smelling lochia. Intra-uterine douching. Recovery.