Thesis
as Candidate for degree of
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Treatment in cases of Placenta Previa

Clinical Experience:
Two cases of this comparatively rare midwifery mischief have occurred to the during an experience of 239 cases. This is a higher rate of frequency than that given in the Obst. Books which estimate it at 1 in 543 (Playfair Vol. II. p. 84) or 1 in 1000 (King Manual of Obstetrics) p. 230

Case 1.

Late on a Sunday evening in April 1889 a man came for me, stating that his wife had been taken with a "severe flooding" and that this hemorrhage was the 2nd attack, the first, a less severe one, having occurred 3 days before. His wife was near full term and in her previous 6 labors had always been attended by a midwife. I suspected Placenta Previa and therefore added Barnes dilators to my obstetric bag, and hurried to the house, a mile distant. The husband urged me to lose no time for he feared his wife
would be dead before arrived, as the blood had soaked through the bedding to the floor. Nor were his years without justification. The woman was 41 years of age, taller than the average and of good physique, but her face was blanched and had an expression of great anxiety, while her pulse was feeble and her skin cold and clammy.

She was in bed, or rather on the top of the bed with all her clothing on. In this district, among the poorer classes, a woman during labor keeps all her clothing including boots, stays, and petticoats. The corner of the feather bed is turned up, and she lies on the subjacent pallissase till the child is born, yanked and dressed, after which the mother is undressed, has her linen changed, and is placed between the sheets.

A case of placenta praevia under such conditions in a small badly lighted bed-room puts a man "on his mettle." The woman's petticoats and the bedding were saturated with blood, and on the floor was a large half-dried blood-stain where the short sighted and rheumatic old
The midwife had been trying to make things look tidy. On examining,
per vaginam, it was found, after
removing a mass of clots that the
to was well dilated, and the uterine
mass presenting to the examining
finger was diagnosed easily enough
as the placenta, though which
the head could be felt indistinctly.
Arterial blood was still oozing.

to take off the woman's boots
and stays was the next step while
an active and reliable nurse, who
lived close by, was somehow un
willingly summoned by the
husband. Homœopæia for a time
was slight, and with the help of
the two women I got the patient
gently moved so as to lie across
the bedstead. Abdominal palpation
was now possible and the head of the
child was easily made out, being
above the misplaced placenta
while the breech was at the fundus.

To chloroform turn and deliver
was at once determined on; indeed
no other course was open as the
placenta was over the as internum
"central". Brandy, which had been
given freely on first seeing the patient
was again administered both by the mouth and by hypodermic syringe. Nausea was also given, and then anaesthesia was produced, leaving the chloroform bottle in charge of the old midwife, the nurse and I for the patient into the lithotomy position. One knee was grasped by the nurse who also helped to keep the other knee jammed against the end of the iron bedstead, the bars of which the woman's left foot was held but the absence of a third reliable person to take charge of one leg prolonged the process of turning while the stupidity of the old rheumatic midwife who was giving the chloroform was a great hindrance. She had been shown how to manage the towel with the anaesthetic but found it impossible to lie on her knees on the bed and so she slipped off quickly after leaving the towel on the woman's face. She turned her breathing gave warning, and the old midwife for her next instruction in terms more forcible than polite.

I managed to press the fingers beneath the placenta + uterine wall
and turned by the bi-polar method.
As soon as I felt a leg down the
hemorrhage ceased. After a short
interval as there were no uterine
cramps and the woman was
greatly exhausted I determined
to extract the child and in this
description must begin with the head. The
child was dead as I anticipated.
A uterine injection with ending
up to oz was employed to
finish with, and the woman
was then undraped and placed
in bed with hot water bottles
at her feet. I gave her 7½
the liquid extract of opium, and
after waiting 2 hours and finding
the womb fairly firm and with
no tendency to parturition
abnormal, I left the case, hoping,
though not confident, that her
natural powers would enable her to
recover from the terrible strain to
which her vital powers had been
subjected. In this I was not
disappointed for though the hang
between life and death for 3 days,
she then began to get a little stronger
and by judicious dieting and stimulation.
chiefly with Coleman's meat and malt wine. She made a good though very protracted recovery in 3 months. Iron was the chief drug administered during this period, and for the first week a 2 per cent. solution of citric acid was used daily as a vaginal douche.

Case II: as the case first described the placenta was completely over the cervix uteri, but in the 3rd only partially. I was called to see the woman owing to hemorrhage having set in. The pains had not been very severe and the hemorrhage had come on suddenly. This was the 6th labour and the mother (age 34 years) was of average strength and physique and fully 8 months advanced in pregnancy. On examining the vagina I found some clots in the vagina and the cervix dilated very slightly - not enough to permit the passage of one finger while the fornices felt thick and boggy and the head of the child could be felt indistinctly. Pelvicotomia would not be made out. Abdominal palpation showed the head high.
and easily touched and confirmed my diagnosis of placenta previa. I waited 2 hours during which there were no pains, and as the hemorrhage did not return and the woman lived close at hand, I then determined to delay emptying of the uterus in the hope that rest in bed and hemostatics would suffice. For 2 days the progress favorably but pains again set in with much more profuse hemorrhage than before. The service now permitted easily the passage of one finger and I determined to empty the uterus. Barnes dilators No. 2 and 3 used with antiseptic precautions acted in about 2 hours, during which time was practically a cessation of hemorrhage. I then gave chloroform and turned as forceps could not have been applied since too much of the placenta intervened. Unfortunately the membranes ruptured before I began version, so that I was forced to pass the whole hand instead of the fingers into the uterus. A uterus curette was again as in the first case and for the first week a daily vaginal douching with the bichloride of Mercury. The woman was untroubled.
and in bed before I began to write, and of had more efficient help than I had in the first case. The child was dead but the mother, although she showed slight signs of mania for 24 hours, made a good recovery in about 4 weeks.

**Treatment**

The treatment in cases of Placenta Previa indeed the whole subject has been the theme of much theory and dogmatism. In the history of Philosophy we have sometimes one dogmatism following another, while both are succeeded by a period of scepticism. The dogmatism of the Stoics was followed by that of the Epicureans and led up to the Sceptics, after which Philosophy was placed on a true foundation. So with this subject of Placenta Previa: Scepticism will thence and dogmatism is necessary, help to the attainment of strict knowledge. Not that theories should be disallowed in science, provided we avoid the danger of making our facts fit


the uteri.

The first man who is fortunate enough to live in the world a study of placenta praevia from frozen sections of a fetal case will doubtless raise the subject out of the region of theory into that of practical knowledge. Indeed a study of the classical sectional drawings by Braune and Chiari of ordinary placental separation help greatly to a clearer understanding of Placenta Praevia.

We adopt as a definition of Placenta Praevia that given by Dr. D. H. Hart in his Class Lectures viz.

"The implantation of the placenta such that its lower edge during labor comes to lie below Handel's ring." This ring is a particular ring and is the furrow between the thinned out cervical canal and thickened uteri.

The treatment of Placenta Praevia has two ends in view

(a) to save the life of the mother

(b) to save the child.

Barnes states that "Sir Simpson and Churchill have expressed the opinion that the life of saving the child after"...
"Scurfeely to influence the treatment."

What further the case as to the child to

strongly. Barnes in the same paper states
that out of 62 cases 23 children were

born alive, and these figures induce
us to think that the child's life is

worthy of some consideration, though

of course quite subsidiary to that

of the mother.

How are these ends to be

attained? To answer this question

we must know the source of danger

to mother and child. Hemorrhage

is undoubtedly the greatest danger.

What is the source of blood?

Hamilton, Kinkade, Wood, Redford and

Simpson adopted the view of Roulinis

of Oxford. "The blood proceeds more

from the vessels of the detached

portion of the placenta than from

the sutured vessels of the uterus."

This view is now known to be erroneous,

for the Hunteri showed that there

is a slow uniform current in the

placenta, and it is said that

MacKenzie showed

by experiment that when he "opened

the uterus of a pregnant female and

detached the placenta, the blood flowed

freely from the uteri of mesenterial."

*Barnes Lectures, p. 404*
He also partially detached the placenta in a woman of infected, dehydrated blood, into the hypogastric arteries. He again observed that the blood flowed exclusively from the uterine and from the utero-placental arteries.

Clinical observation shows that the blood lost by women in Placenta Rupture is arterial of the same nature as that of the Placenta.

That the Placenta is not the source of loss is also shown because "there are cases in which the hemorrhage did not stop or total detachment of the Placenta." The liver ordre is probably that the blood is lost from the utero-placental blood vessels, and "it may come from the circular sinus of the Placenta." (Hart, class lectures)

How then is this source of blood loss to be held in check? By trying to imitate nature's method. During labor, nature effects this by contraction of the uterine muscle, a retraction of the uterine muscles from the Placenta. Hence it follows.

Barnes: Lectures, p. 404.
that the plan advocated by Sir James
Simson viz. to totally detach
the placenta so as to check the
source of blood is not imitating
nature. The utero-placental blood
vessels must be closed by the contraction
of the uterine muscle else bleeding
will continue.

Barnes who is very severe
in his remarks on Sir James Simpson (p. 405)
is equally dogmatic and much
less logical. Granted the cause
of hemorrhage to be in the placenta
itself, and the treatment recommended
by Sir James is the logical conclusion
to draw, prevent the blood from
dripping into the placenta or it can't
get out of it. Barnes states
the correct view as to the source
of blood and yet recommends
a modified form of Sir James's
separation plan viz. to separate
the placenta from the lower uterine
segment or "marginal zone" i.e. for
about 3 inches. Barnes says
"considerably some amount of
retraction of the cervix takes
place after this operation and
after the hemorrhage ceases" p. 419.
Why should it not be always thus.
often that the haemorrhage occurs. Barnes has no explanation to offer of such failures — he puts the question itself with the commentaries of old who "each dark passage them and hold their pulsing candle to the sun". The mere separation of the placenta whether total or partial cannot in itself account for the cessation of haemorrhage. What is wanted is to get a Briar contraction. Barnes (p. 404) elaborates a sort of ground plan of the uterine giving us idea of safe and unsafe placental seat thus: — but he finds no evidence sufficient to justify this diagrammatic representation. Besides he misinterprets the action of the cervix in dilatation: — "The lower segment of the womb must open to an exact correspondence to the circumference of the child's head in order to permit its delivery. By noting therefore the amount of
necessary recession or shortening of the lower segment of the womb. To reach this greatest of expansions, we shall obtain the exact measure of the original depth of the cervical zone, the region of prenatal placental attachment." P. 411.

The lower segment does not undergo recession or shortening; it gets canalized for "during labor, the uterine cavity diminishes and the cervical canal increases in capacity: the segments of the pelvic floor are separated by the pubic segment being drawn up and the sacral segment being driven down and back and thinned out," i.e., "the cervical canal and pelvic floor are canalized during labor." (Hicks' class) This can be diagrammatically represented thus:

\[ \text{Diagram of uterine canal and pelvic floor} \]

The uterine thickness after contracting - it keeps up the purchase gained. Thus lesser in capacity while the placenta also thicken, and the membranes
and liquor amnii are bled off into the perineal canal. But there is no hemorrhage because the membranes separate in the glandular layer where there are few vessels. "The placenta which grows only in uterine cavity & not below, the os internum is born into the cervical canal before the child in cases of Placenta Praevia" (Hart's lectures)

As Barnes in the paragraph quoted has taken a wrong view of what takes place in the lower segment of the womb, this treatment of partial separation in Placenta Praevia is not in imitation of nature's plan. Besides the cessation of bleeding in Barnes's cases can be explained by the child coming down, & thus causing pressure, while at the same time the uterus lessens in capacity, i.e., it contracts its muscular fibres and so helps to close the uteroplacental blood-vessels, as its contents sink lower.

As regards the effect of pressure Barnes is not self-consistent in describing the
the use and effect of his dilators he days at p. 420 "When the bag is fully distended, keep it in situ for half an hour or an hour if necessary. During this time, the hemorrhage is commonly suspended; probably the intra-uterine portion of the bag presses upon the mouths of the hinder vessels", and yet his physiological Proposition 22 7 p. 421 states "this haemostatic process does not depend upon pressure on the cervix border of placenta by the presenting part of the child or distended membranes. Pressure must be haemostatic done as elsewhere, whether it be produced by Barnes's bag, the bag of membranes, or the presenting part of the child.

Puncture of the Membranes

Playfair Vol II p. 94 says

"I am inclined, for these reasons, to agree with the recommendation that puncture of the membranes should be resorted to in all cases of Placenta Praevia." Barnes says the same thing. Playfair admits that in "complete" cases it
cannot be an easy matter to puncture the membranes and in such a case he advises other methods. On the other hand the dilating power of the unruptured membranes upon the os, their power of pressure, and the heat aid which they give in turning far outweigh the advantages of increased uterine contractions for by rupturing them as a first measure placing the vagina. This is recommended by some but it is a mere temporary expedient, and dilatation of the cervix by Barnes's bags is much more efficacious in suitable cases.

Turning. This is the only possible treatment in complete cases, as the old and coarse method of forcing the fist of the obstetrician through the placenta in such cases is now discarded.

In marginal or lateral cases where forceps can't be applied turning is also available. Barnes's dilators are of the greatest service here and should always be used if cervix needs dilatation.

The bi-polar method is of course to be preferred where possible.
Entire Separation of the Placenta.

This was originally recommended by Sir James Simpson, but Barnes clearly shows error in the detail involved in this treatment by a comparison of the size of the placenta and the length of the finger(s) which alone were to be introduced.

If complete separation is to be carried out, the 2 or 3 inch finger cannot possibly reach the whole placental area of attachment about 9 inches in diameter; therefore the whole hand must be introduced into the uterus, better done bringing down the child's foot. This method is, as we have tried to show founded on a wrong basis, and besides its results were very unsatisfactory.

But Barnes is not fair to Sir James Simpson, and bids me to suppose that he recommends this plan in every case. Mayfair Vol. II p. 96 gives a much clearer view of the cases where Sir James advised the adoption of his method.

I propose to give a short summary of the modes of treatment.
Summary of Treatment:

The main principle is "delivery" for delay is dangerous to both mother and child.

Turning in "complete" cases:

and sometimes in "marginal" and "lateral" cases if forceps cannot be applied.

Forceps in "lateral" and "marginal" cases if there is room to apply them.

Dilatation of cervix to be hastened by the use of Barnes's bag.

Things to be avoided as a rule:

(a) Rupture of membranes
(b) Plugging of vagina
(c) Separation of placenta.

Judgment, skill, and self-possession of the accoucheur indispensable as cases vary greatly.