

PLACENTA PREVIA

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THE ultraconservatism in the practice of obstetrics which has been characteristic of the medical profession of this country has been much in evidence in the treatment of placenta previa. Reluctance to adopt measures which seem radical has no doubt in some instances served to retain a proper balance of obstetric procedure. However, in other instances it has retarded progress and definitely caused the continuation of high mortality by encouraging adherence to obsolete methods.

I fear that this is the case in the treatment of placenta previa. In view of the satisfactory results obtained, it has seemed to us that one of the greatest advances in modern obstetrics has been seen in the treatment of placenta previa, and yet results reported from some prominent clinics are most discouraging. An analysis of these reports shows that older methods are still in vogue and that practically the only difference between the methods of twenty-five years ago and of today, lies in the fact that the accouchement forcé has been almost universally given up. Rejoicing in the relegation of this most disastrous procedure to the scrap pile, we learn with dismay of attempts recently made to revive it disguised by a new name, the Delmas method, and masked by spinal anesthesia. If we were to eliminate from the statistics of twenty-five years ago the maternal mortality rate of accouchement forcé which was not uncommonly as high as 30 and even 60 per cent in cases of central placenta previa, and were to include in these statistics only the cases treated by Braxton-Hicks version and the cervical bag, we would find a maternal mortality of from 6 per cent to 13 per cent, averaging about 10 per cent. The average maternal mortality today where these same methods are used is probably about 10 per cent.

In cases of complete or partial placenta previa, that is cases in which the placenta definitely overlaps any part of the os, only three procedures are worthy of consideration. First, cesarean section; second, the cervical bag; third, the Braxton-Hicks version without extraction. In this country apparently the Braxton-Hicks version has never been popular and is very little used today. Abroad, however, it is still used somewhat extensively. However, the mortality rate for the mother from this method is seldom lower than 6 or 7 per cent and more often 10 per cent and the fetal mortality is naturally very high because the best results for the mother are obtained when no extraction is performed, the child being used merely as a tampon. With

its excessive mortality for both mother and baby this method should be considered only when facilities for better procedures are not available. As a last resort, in a place where there are no facilities for cesarean section, where no cervical bag or packing is available, a physician should bear in mind that by proper manipulation the baby can be used as a tampon to control hemorrhage. Such emergencies are rare and certainly would not arise in any locality within reach of a well organized medical center. In most instances it would be better to avoid all manipulation until proper help and facilities are available. The bag method would naturally offer about the same results for the mother as the Braxton-Hicks version without extraction and of course causes less fetal mortality.

The following are some characteristic reports of cases of placenta previa published during the last three years.

GROUP 1. TREATED CHIEFLY BY OLDER METHODS

G. L. Broadhead and E. G. Langrock, 1927	
Cases	165
Maternal mortality	10.9 %
Fetal mortality	66.7 %
P. Ramos and J. Basan, 1927	
Cases	104
Maternal mortality	7.68%
L. A. Ledoux, 1927	
Cases	66
Maternal mortality	12.1 %
O. Korthauer, 1927, Bremen Women's Clinic	
Cases	96
9 Braxton-Hicks version:	Maternal mortality 11.1 %
	Fetal mortality 88.8 %
8 Version:	Maternal mortality 50 %
	Fetal mortality 85.5 %
29 Cesarean section:	Maternal mortality 6.9 %
	Fetal mortality 17.3 %
or 67 Cases not delivered by cesarean section:	Maternal mortality 11.9 %
	Fetal mortality 61.2 %
29 Cases delivered by cesarean section:	Maternal mortality 6.9 %
	Fetal mortality 17.3 %
F. C. Irving, 1927	
Cases	57
Maternal mortality	3.5 %
Fetal mortality	57.9 %
J. Futh, 1928, Coblenz	
Cases	606
Maternal mortality	14 %
Fetal mortality	39.8 %
L. H. Douglas and I. A. Siegel, 1928	
Cases	64
Maternal mortality	6.25%
Fetal mortality	53.8 %
Williamson, 1929	
Cases	65 %
Maternal mortality	7.7 %
Fetal mortality	47.7 %

All by version

Voorhees' Bag Method

F. H. Lacey, 1929	
Cases	562
Maternal mortality (Exclusive of cesareans)	8.88%
Fetal mortality (Exclusive of cesareans)	64.64%
J. Karstad, 1930	
Cases	361
Maternal mortality	4.7 %
Fetal mortality	57.4 %
Summary.—Total cases, 2117; maternal mortality	9.68%

GROUP II. TREATED CHIEFLY BY CESAREAN SECTION

E. Frey, 1927	
Cases	79
Maternal mortality	2.53%
M. Henkel, 1928	
Cesarean section in primiparae and most serious cases	83
Deaths	1 or 1.2 %
DeLee, Unpublished Report	
Low cervical section	44
No deaths	
A. H. Bill, 1927	
Series "B"—Prophylactic blood transfusion and cesarean section	56
Maternal mortality (1 death)	1.78%
Fetal mortality	32.1 %
Summary.—Total cases, 262; maternal mortality	1.78%

The only uniformly satisfactory results are seen in the series of cases in which the procedure of choice was cesarean section and especially where combined with prophylactic blood transfusion in the more serious cases. However, I am not so much concerned with the reports in the literature as I am with the principles underlying the treatment of placenta previa and the reasons for the difference in maternal mortality rates between the older methods and the newer methods.

A placenta previa death is usually one from postpartum hemorrhage. There are two distinct reasons for these postpartum deaths: first, injury to the cervix and lower uterine segment brought about by manipulation necessary to extract the child through the birth canal; second, general atony of the patient or shock resulting from previous loss of blood and the effect of this condition upon the contractile power of the uterine muscle.

While better results are undoubtedly obtained by those methods which bring about a gradual dilatation of the os, such as the cervical bag or the Braxton-Hicks version without immediate delivery, it must again be emphasized that any method which causes a stretching of the placental site is very apt to give rise to postpartum hemorrhage even though there be no apparent laceration of the cervix. In a previous paper on placenta previa I illustrated this point with several cases treated by the bag method and in which death from hemorrhage had occurred. Autopsies showed no apparent laceration of the cervix in these cases and still there was bleeding from the placental site which was absolutely uncontrollable. In some such cases as these there is undoubt-

edly actual injury to the placental site not apparent in the vaginal portion of the cervix. In others probably the relatively poor contractile power of the lower segment of the uterus is not sufficient to control bleeding from the uterine sinuses when located in this part of the uterus. Clinically it has been our experience that when there has been no dilatation of the lower segment of the uterus and there is therefore no disturbance of the placental site, the baby having been extracted from above, postpartum hemorrhage from the placental site is practically nil. However, in any case in which there has been dilatation whether accomplished manually, by the baby or bag, there is an added element of danger of postpartum hemorrhage. It would seem, therefore, that the only safe method of delivery of the baby in cases of placenta previa is one which leaves the placental site undisturbed and of course the only method which will do this is abdominal cesarean section.

The second cause of postpartum hemorrhage deserves just as much consideration as the method of delivery. The delivery of a baby is never a bloodless operation. Therefore, the additional loss of blood caused by the delivery is very likely to throw a patient who has lost considerable blood into shock, even though she does not seem to be in this condition before delivery. We must also remember that loss of blood on the part of the patient causes an atonic condition of the uterine muscle which in turn causes further hemorrhage, all combining to develop a vicious circle. If in delivering a patient with placenta previa one does not anticipate the development of this vicious circle and prevent its occurrence by prophylactic blood transfusion the results may be disastrous even though the best method of delivery be used. All patients with placenta previa do not require blood transfusion and it is somewhat difficult to formulate a definite rule as to when to transfuse and when not to transfuse. However, it is far better to err on the side of safety than to encounter an uncontrollable postpartum hemorrhage. We are now accustomed to transfuse cases in which the systolic blood pressure is below 100 and in which the red blood count is as low as 3,000,000. Of course one must try to estimate the amount of blood lost and also take into consideration the general appearance of the patient and other evidence of impending shock. The rapidity of the pulse is of somewhat minor importance, for in some of these cases there is a moderately slow pulse even though the blood pressure is extremely low. In view of what I have said it must be clear that we are strongly in favor of the prophylactic blood transfusion rather than transfusion given after delivery, often as a last resort. The blood transfusion in these cases is given either immediately before the delivery or simultaneously with the delivery. In making a diagnosis we do not lay so much stress upon the variety of placenta previa as upon the mere fact of its existence. In other words

we make no serious attempt to distinguish between a central and partial placenta previa but feel that in any case in which there is placenta previa and hemorrhage with little or no dilatation of the os whether in primipara or multipara, cesarean section is indicated. We do, however, try to distinguish between placenta previa and accidental separation of the placenta, not so much that the treatment would be different in the two types of cases as that the differentiation helps in estimating the probable amount of blood which the patient has lost. For example in placenta previa the amount of external bleeding shown upon the patient's clothing or on the bed, closely corresponds with the total loss of blood; while in cases of premature separation of the placenta one might be seriously misled by a small amount of external bleeding and think that the patient had not suffered much loss of blood whereas the uterus itself might be filled with concealed blood. We make our probable differentiation between these two conditions chiefly by abdominal examination aided somewhat by rectal examination.

In placenta previa abdominal examination reveals practically the same condition as any normal case, and in most cases the fetal heart is still heard. In cases of premature separation of the placenta the abdominal findings are very different. The uterus is usually tense and somewhat distended and the fetal heart is not usually heard, never in cases of complete separation of the placenta. The location of the uterine bruit is also of considerable help in the diagnosis of placenta previa. It is often possible to trace this bruit into the lower uterine segment and across the symphysis pubis, whereas if the placenta is normally situated the uterine bruit is not heard over the lower uterine segment. On rectal examination it is usually possible to distinguish the thickened mass of placenta between the examining finger and the presenting part even though there is no dilatation of the os. We never attempt to make a diagnosis by vaginal examination. While the diagnosis of placenta previa made in this way is of course not as certain as if one inserted the finger into the os and actually felt the placenta, it is vastly more important to avoid all vaginal examinations than to make an accurate diagnosis of the variety of placenta previa. The diagnosis is invariably confirmed and the degree of overlapping of the os by the placenta determined during the operative delivery.

In view of our firm belief in the importance of keeping away from the placental site during the operation we have from choice performed the classical cesarean section. In cases which have been examined vaginally and in which there is a suspicion of infection, it is preferable to perform the low cervical operation or even the Porro operation. In two of the cases of our present series the Porro operation was performed for this reason. However, it is surprising how few contaminated cases of placenta previa we see. This can be attributed only to intensive teaching for many years that vaginal examinations

should not be made in cases of antepartum hemorrhage. Undoubtedly this policy quite generally followed in Cleveland is in a large measure responsible for our good results. All cases of antepartum hemorrhage should be in a hospital if one is available. It is safer to deliver immediately and this should always be done if the hemorrhage continues or if the baby is viable. However, there are a few exceptions to this rule, namely, those cases in which the first hemorrhage has promptly stopped and the patient is not far enough advanced in pregnancy to assure a living child. We sometimes allow a patient of this type to continue in her pregnancy but under the absolute provision that she be in the hospital and in bed. Rather than allow her to be at home and to be up we insist upon delivery. However, in a number of cases with thorough cooperation on the part of the patient it has been possible to allow the pregnancy to continue and eventually to deliver a living child.

The following statistics are from the Maternity Hospital of Cleveland. In 1927 I reported a series of cases delivered according to our present methods from January 1, 1922, to May, 1927. In this list there were 56 cases with one maternal death. In the present list I have brought this series up to July 1, 1930, as follows:

JANUARY 1, 1922, TO JULY 1, 1930

	Total deliveries	34,343
	Cases of placenta previa	104
	1 placenta previa in 330 cases	
104 cases of placenta previa	Complete	47
	Partial	27
	Marginal	30
Method of delivery	Cesarean section, classical	78
	Cesarean section, low cervical	2
	Cesarean section, Porro	2
	Podalic version (bag)	15
	Forceps	5
	Spontaneous	2
	Prophylactic blood transfusion and cesarean section	23
	Maternal deaths	2 or 1.92%
	Fetal mortality (Died 16; Stillborn 16)	32 or 30.76%
	Cases requiring blood transfusion	22.11%
	Cases delivered by cesarean section	78.84%

In this series of cases there was only one death from hemorrhage. This case was fully described in my previous paper on placenta previa and was largely attributable to the obstinacy of the patient's husband who not only refused to give his consent to delivery but also refused to act as donor for a blood transfusion. The patient was really moribund at the time of treatment.

The cases which were treated by version and forceps were those of marginal placenta previa in whom, at the time of the first definite hemorrhage there was sufficient dilatation of the os to permit delivery by these methods. In the five cases delivered by forceps, preliminary

rupture of the membranes, allowing the fetal head to descend into the cervical canal, was sufficient to control hemorrhage. These patients were chiefly multipara. It is interesting to note that our records show a continually decreasing number of cases treated in this way. In fact in the last half of this series only four patients were delivered by version.

While our chief interest is of course in the reduction of maternal mortality it is interesting to note that more than two-thirds of the babies were saved. In other words the methods which give the best results for the mother are also responsible for the lowest fetal mortality.

CONCLUSIONS

All cases of placenta previa should be treated in the hospital if possible and should be sent there immediately without vaginal examination or packing.

A careful estimation of the loss of blood should be made and in all cases of doubtful operative risk, prophylactic blood transfusion should be performed and sufficient blood given to insure the safety of the patient.

If there is little or no dilatation of the os, cesarean section should be performed whether the baby is alive or dead, for the viability of the child has no bearing on the choice of method for delivery.

If there is considerable dilatation of the os and the fetal head is engaged, simple rupture of the membranes may control hemorrhage until the baby may be delivered by forceps; or if the fetal head remains high, podalic version may be performed. These procedures should be used only in the marginal variety of placenta previa.

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