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A STATISTICAL STUDY OF THE CASES OF PLACENTA PREVIA OCCURRING IN THE JEWISH HOSPITAL FROM 1935 TO 1946

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IN RECENT years our management and results in cases of placenta previa have been so markedly different than in the past, that we considered it worth while to present a brief report on the subject. There has been a marked reduction in maternal mortality and an appreciable reduction in fetal mortality. These seem to be directly related to the high incidence of cesarean section and the frequent use of blood transfusions. In the past, section was resorted to in only a few selected cases and blood was given only when the blood loss was very severe. In the group of cases to be presented here, section was done in 60 per cent of all the cases, while transfusions were used very freely regardless of whether the case was treated by simple rupture of the membranes or by cesarean section. Our own experience and a study of the literature have convinced us that the replacement of blood lost in cases of previa is of crucial importance.

From January 1, 1935, to July 1, 1946, there were 37,688 deliveries in this service. Among these were 165 cases of placenta previa; an incidence of 1:228, or 0.43 per cent. There were 61 (37 per cent) primiparas, and 104 (63 per cent) multiparas. The youngest patient was 19 years, the oldest 40 years.

Previous bleeding, varying from slight staining to recurrent moderate bleeding was recorded in 64 cases. Of these 64 patients, 17 had been hospitalized once or more during the pregnancy. Membranes were intact in 149 cases, and ruptured in 16. Nine patients were admitted in labor and in 5 cases symptoms of previa did not present themselves until after the onset of labor. The varieties of previa were distributed as follows: central, 37; partial, or lateral, 73; marginal, 43. In 12 instances the degree of previa was not recorded. Of the 165 cases studied, 160 were admitted in good condition, 4 in fair condition, and only one in very poor condition.

Management

Of 165 cases, 97 were handled by abdominal cesarean section, one by vaginal cesarean (vaginal hysterotomy), and 67 by the vaginal route. Forty-three patients were given transfusions, ranging from 500 to 3,400 c.c. of blood. In all, 60 transfusions were given.

The cases handled vaginally were treated as follows:

Vaginal Hysterectomy	1 case
Nothing, or Rupture of Membranes	21 cases
Other Vaginal Methods (Bag alone, bag and version, or version-extraction)	46 cases

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Fetal Mortality:

Babies alive and discharged	124 (74.2%)
*Stillborn	17 (10.1%)
*Neonatal Deaths	26 (15.5%)
	167 (2 sets of twins)

TABLE I. MANAGEMENT AND FETAL RESULTS

NOTHING OR RUPTURE OF MEMBRANES 21 CASES (12.7%)	OTHER VAGINAL METHODS (BAG, VERSION, ETC.) 46 CASES (27.8%)	SECTIONS 98 CASES (59.3%)
Babies > 5 lbs. alive	Babies > 5 lbs. alive	Babies > 5 lbs. alive
12 (57.1%)	12 (26.1%)	77 (78.5%)
< 5 lbs. alive	< 5 lbs. alive	< 5 lbs. alive
6 (28.5%)	5 (10.9%)	10 (10.2%)
> 5 lbs. stillbirth or neonatal death	> 5 lbs. stillbirth or neonatal death	> 5 lbs. stillbirth or neonatal death
0	9 (19.6%)	2 (2.0%)
< 5 lbs. stillbirth or neonatal death	< 5 lbs. stillbirth or neonatal death	< 5 lbs. stillbirth or neonatal death
3 (14.2%)	20 (43.5%)	9 (9.1%)

Table I gives at a glance the method of management and the fetal results. This table illustrates rather strikingly that the best fetal results are obtained when either a very simple vaginal procedure, such as rupture of the membranes, is done, or when a section is done. In the first group, the fetal salvage is over 85 per cent; in the section group it is over 88 per cent. The highest fetal mortality is found in the group handled by either bag, bag and version, or version-extraction. In this latter group, the fetal survival rate is only 37 per cent. While it is true that this multiple procedure group has in it the highest number of babies under 5 pounds and this is partly responsible for the high fetal loss, it is only partially so; in the same group, the babies of 5 or more pounds have a survival rate of only 45.7 per cent. From this it is obvious that the multiple procedure method of handling placenta previa through the vagina is the important factor in giving the high fetal mortality.

Maternal Results

There was only one maternal death in this group of 165 cases.

CASE REPORT.—Patient was a 39-year-old gravida vii, para iv, 32 weeks pregnant. Was admitted in 1937 with history of bleeding on and off for one month. A vaginal examination was done on the second day after admission when bleeding recurred. No placental tissue was felt at this time. A second vaginal done at a later time showed a marginal placenta previa. Upon further bleeding, a third vaginal was done and central placenta previa was diagnosed. Membranes were ruptured and a bag inserted through the placenta. Bag expelled 49 hours later and a hand and cord prolapsed; temperature at this time was 103°, pulse 130. A version was done and spontaneous delivery followed 10 minutes later. Patient died of sepsis on the 12th day after delivery. A positive blood culture for streptococcus viridans was obtained during the illness. Patient also had a toxic anuria with a urea nitrogen of 153. She received sulfanilamide; 300 c.c. of blood on the 9th day and 500 c.c. on the 10th day.

*Thirteen were 28 weeks or less.

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Morbidity

Of the 21 cases treated by simple rupture of membranes, 3 were morbid, or 14.2 per cent. Average number of days of morbidity was two.

Of the 46 cases handled by more complicated forms of vaginal delivery, 14 or 30.4 per cent were morbid. Average number of days of morbidity was 3.8.

Of the abdominal sections, 66 were classicals, 30 were low-flap, one was a Waters. Fifty-one of the 97 cases, or 52.6 per cent were morbid. Average number of days of morbidity was 4.1. There was no appreciable difference in morbidity between the classical and low-flap sections.

In 1936, Ronsheim reported 283 cases of placenta previa treated at our hospital from 1907 to 1935. The important statistical comparisons between this series and the one reported here are brought out in Table II.

TABLE II.

	MANAGEMENT				
	GROUP I	GROUP II	GROUP III	MATERNAL MORTALITY	FETAL MORTALITY
Ronsheim's Series 283	23.3%	65.7%	11.0%	5.3%	46.3% (stillbirths only)
Present Series 165	12.7%	27.8%	59.3%	0.6%	25.8%

In his paper, Ronsheim advocated termination of the pregnancy with the first episode of serious bleeding, and concluded that the bag was the ideal method of treatment. Both of these ideas are refuted by the more recent literature, as well as by our own results in the group of cases reported here.

Watson and Gusberg, in 1943, reported a small series of cases and concluded that the use of Voorhees' bag was dangerous and inefficient in the treatment of placenta previa. These authors felt that the only two efficient methods of treatment were rupture of the membranes and cesarean section.

Williamson and Greely, in 1945, reported 162 cases and were of the opinion that the best results from vaginal delivery were obtained in those cases in which the bleeding could be controlled by simple rupture of the membranes. Otherwise, cesarean section seemed to be the management of choice.

Yepes and Eastman, in 1946, conclude that abdominal delivery should be employed in all cases of this complication with the exception of marginal types in multiparae with vertex presentations.

Our own results, with the markedly improved fetal and maternal mortality, would lead us to agree with the conclusions of the above three groups of authors.

Heretofore there has been general agreement with Ronsheim's statement that the uterus should be emptied with the first episode of vaginal bleeding. More recently, MacAfee and Johnson, working independently, have advocated a waiting policy in many cases of placenta previa because they felt it would improve the fetal prognosis. Both papers contend that hemorrhage in placenta previa is rarely, if ever, fatal in the absence of vaginal manipulation; therefore they advocate a waiting policy with the hope of getting better fetal results. This is particularly true for those cases that are not yet viable. Eastman, in checking 304 cases of placenta previa, found no instance of fatal hemorrhage in the absence of vaginal manipulation. Eastman then concludes that a patient with placenta previa with a non-viable or questionably viable baby, can often be safely carried to viability, provided she is in a well-equipped hospital and under expert care.

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Discussion

Most textbooks on obstetrics agree that the management depends upon the type of previa, the parity of the patient, the condition of the cervix and whether or not the patient is in labor. The type of previa is often difficult to determine accurately because it depends upon the amount of cervical dilatation. Theoretically it is impossible to determine the exact degree of previa until full or almost full dilatation has occurred. For this reason, most statistical tabulations, including our own, as to the type of placenta previa, are unreliable. All agree that central previa, in primiparas or multiparas should, with almost no exceptions, be handled by section. Some go further and state that all previas in primiparas, except the marginal variety, should be handled by section.

Some few observers advocate the use of the bag, but this is often followed by other operative vaginal procedures with the attendant dangers of laceration, hemorrhage and infection. The recent literature and our own results prejudice us against the use of the bag.

All agree, however, that blood should be used freely to replace blood loss regardless of the variety of previa, the parity of the patient or the method of management. Forty-three of our patients were given transfusions, from 500 to 3,400 c.c. In all, 60 transfusions were given. In recent years, all patients were given Rh negative blood. Most observers advise a gentle vaginal examination to be certain of the diagnosis, while some few are against it. We feel that in the vast majority of cases, a gentle vaginal done under strict aseptic precautions, with the operating room ready for possible section, can and should be done. In our series of 165 cases, 98 had vaginal examinations while 67 did not.

The time to terminate the pregnancy in cases of placenta previa is still a moot point. Until recently, the teaching by most authorities has been that the uterus should be emptied as soon as a diagnosis of placenta previa was made. The recent papers by Johnson of Texas and MacAfee of Belfast, Ireland, and the comments upon them by Eastman, seem to indicate that it is probably safe to temporize in some of the nonviable or near viable cases provided they are under good care in a well-equipped institution where they can be watched closely and blood loss can easily be replaced. This should bring about considerable improvement in the fetal mortality.

Our results in the group of cases herein presented have convinced us that the best results follow either simple rupture of the membranes or cesarean section. Practically the same conclusions were reached by Watson and Gusberg; Yepes and Eastman; and Williamson and Greely.

Conclusions

1. We have presented a brief review of 165 cases of placenta previa with a fetal mortality of 25.8 per cent and a maternal mortality of 0.6 per cent.

2. This group of cases is compared with a previous series of 283 cases reported from our hospital 10 years ago with a fetal mortality of 46.3 per cent and a maternal mortality of 5.3 per cent.

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3. The reasons for the marked improvement in fetal and maternal mortality, we believe to be the greater number of cases that were handled by either simple rupture of the membranes or cesarean section, and also to the more frequent use of blood transfusions.

4. The hydrostatic bag, or the bag followed by other vaginal manipulations, is not a good method for treating placenta previa. We predict that it will eventually be discarded completely.

5. The suggestions of Johnson and MacAfee to temporize in certain cases of placenta previa is worthy of trial. It should lower the fetal mortality.

References

1. Ronsheim, J.: Am. J. Obst. & Gynec. 32: 139, 1936.
2. Watson, B. P., and Gusberg, S. B.: Am. J. Obst. & Gynec. 46: 524, 1943.
3. Williamson, H. C., and Greely, A. V.: Am. J. Obst. & Gynec. 50: 398, 1945.
4. MacAfee, C. H. G.: J. Obst. & Gynaec. British Empire 52: 4, 1945.
5. Johnson, H. W.: Am. J. Obst. & Gynec. 50: 248, 1945.
6. Yepes, L. G., and Eastman, N. J.: South. Med. J. 39: 291, 1946.
7. Eastman, N. J.: Obst. and Gynec. Survey 1: 53, 1946.

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