

PREMATURE SEPARATION OF THE NORMALLY IMPLANTED PLACENTA

AN ANALYSIS OF 61 CASES

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BY DEGREES, rational conservatism, in its application to the treatment of obstetric complications, is gaining recognition. Such, however, has not been the attitude toward premature separation of the normally implanted placenta. There exists an all-too-prevalent feeling that forcible delivery, operative or otherwise, is strongly indicated, especially in the severe type of this condition. It was with the express purpose of comparing the results of conservative and radical treatment, that a study of this series of cases was undertaken, as well as a review of some outstanding reports in the literature.

Over a period of ten years, from September, 1918, to September, 1928, the records of the colored maternity service of Grady Hospital showed 61 cases of premature separation of the placenta, in a total of 9,208 labors, approximately one in 150 labors. Fifteen cases were of the severe type, as manifested by shock and anemia, 7 were moderately severe, and 39 were of the mild type.

Twenty-nine cases occurred in patients from fifteen to twenty-four years of age; 27 cases in patients from twenty-five to thirty-four years of age, and 5 cases in patients from thirty-five to forty-four years of age. There were 18 primiparae and 43 multiparae. Thirty-six cases occurred during the ninth month, 15 during the eighth, and 10 during the seventh month. The Wassermann reaction was negative in 43 cases and positive in 6 cases, a frequency of 14 per cent, or approximately the same as that of the general service at the present time.

Toxemia, as indicated by albuminuria, hypertension or previous toxic symptoms, was found in 33 cases, or more than half of the entire number. In 2 patients, a short cord; in 1, unruptured membranes; in 1, hydramnios; and in 1, trauma appeared to be the etiologic factor. In 23 cases there was no apparent cause, but in 6 of these patients a condition of shock produced a low blood pressure and there was no record of a urine examination. It is probable that some of these were associated with toxemia. There were 5 cases of twins in the series, this being over five times the normal proportion. There were no cases of eclampsia.

The hemorrhage was external in 56 patients and concealed in 5 patients. Definite tenderness and rigidity of the uterus were found in 38

patients, including all the serious cases; in 2 patients the uterine muscle was apparently soft. In the remaining 21 patients, no note was made of this important finding. Whenever possible, a vaginal examination was made to eliminate the possibility of placenta previa. More or less severe shock was present in 17 patients. The placenta showed the typical appearance of premature separation in 52 patients; in the remaining cases the placenta was not adequately described but clinically the diagnosis was certain. Due to a more or less complete separation, the placenta was expelled spontaneously at once or very soon after the birth of the child in 19 cases.

The treatment is classified as follows: (1) watchful expectancy which includes one or more of such measures as rupture of the membranes, the use of an abdominal binder, pituitrin, ergot, morphine, subcutaneous or intravenous glucose or saline solution to combat shock, and transfusion for anemia; (2) conservative interference which includes the use of the dilating bag or catheter to induce labor, or low forceps or breech extraction to hasten delivery; (3) accouchement forcé which includes manual dilatation of the cervix, internal version and extraction or difficult forcep delivery and, (4) cesarean section with or without hysterectomy or vaginal hysterotomy.

Fifty-two patients, including 6 severe or moderately severe patients, were treated by watchful expectancy with only one death, which occurred on the seventh day, due to antepartum infection manifest on admission and not attributable to the manner of treatment.

Five patients, including 4 of the severe type were treated conservatively, labor being induced with a bag. There were 3 deaths in this group. In 1 patient, death occurred three hours after delivery, apparently from shock and hemorrhage, the latter being of the concealed type during the second stage and continuing after the third stage, although the uterus was packed. In another patient, death occurred one hour after delivery by forceps, during which a third degree laceration was sustained, and immediately following which a severe degree of shock developed. The excessive trauma of the forcep delivery undoubtedly produced a fatal degree of shock, as the hemorrhage was not excessive. Definite evidence of toxemia was present in both of these cases. The third death in this group occurred from shock and hemorrhage five hours after admission. The patient had a fibroid uterus and died undelivered. A suitable donor for transfusion could not be found. The membranes were ruptured artificially and labor induced by the bag method. Autopsy showed the placenta to be almost completely detached, and the hemorrhage concealed.

Three patients, one of whom was of the severe type, were delivered by internal version and extraction and all recovered, although in one patient prompt stimulation for shock was necessary immediately after delivery.

mature separation of the placenta in regard to the general condition of the patient and the nature of the bleeding. These basic differences must be the guide in choosing a rational treatment.

The severe type of premature separation is usually complicated by a toxemia which is apparently of a different nature than that of pre-eclamptic toxemia. The toxic element appears to have a destructive effect on the delicate walls of the smallest blood vessels, which is apparently the direct cause of the hemorrhage at the placental site and, in some cases, of hemorrhages elsewhere. Several patients in this series vomited considerable dark blood during labor. This also accounts for the fact that occasionally there is an extravasation of blood between the muscle fibers of the uterine wall, producing hemorrhagic areas over the surface of the uterus, the so-called "uteroplacental apoplexy" of Couvelaire. The toxemia, together with the hemorrhage which takes place, has a marked tendency to produce shock, or if shock is not actually present, it may develop quickly after any additional trauma. Such a patient is not a good surgical risk for cesarean section and especially Porro cesarean. Any additional trauma, such as manual dilatation of the cervix, a difficult internal version and extraction or a difficult forcep delivery, may precipitate a severe degree of shock which may be fatal. One of the deaths in this series occurred from shock within one hour after a forcep delivery complicated by a third degree laceration. The condition of this patient was apparently satisfactory before the delivery. If the case appears to be of the mild type and labor has begun, no interference is necessary, but the patient should be watched carefully for evidence of anemia or shock, and prompt treatment begun if indicated. Precautionary measures should include blood count, blood typing and matching for possible transfusion and preparation for intravenous or subcutaneous saline or glucose solution. Rupture of the membranes at the time the vaginal examination is made and the use of small doses of pituitrin will be indicated. If regular pains have not begun, it is certainly advisable to induce labor by the use of a bag.

If rapid delivery is contraindicated on account of the danger of shock and the case is of the severe type, what assurance is there that the patient will not die from hemorrhage during a slower process of delivery? Blood transfusion should be one of the most effective agents to combat the loss of blood and lessen the tendency to further hemorrhage. If a donor is not available, intravenous saline or glucose solution will be of considerable value. We may also rely to some extent on the fact that the bleeding from the open sinuses is checked considerably by the pressure of layers of clots underlying the placenta, and also by the fact that the intrauterine pressure is markedly increased by the tetanic condition of the uterine muscle. The presenting part tends to block the outlet and an increase in the intrauterine pres-

sure may be obtained with the abdominal binder, pituitrin or ergot. This is entirely different from the condition present in placenta previa, in which the bleeding from the open sinuses finds a ready exit and cannot be checked by pressure unless by the use of a large bag or by the body of the child after a Braxton-Hicks version.

It has been suggested that cesarean section is particularly indicated in cases of uteroplacental apoplexy, in which there is an extravasation of blood between the uterine muscle fibers, on account of the fact that a uterus so affected may not be capable of sufficient contractile power to control hemorrhage after delivery. There is no clinical sign or symptom which will enable us to diagnose this condition of the uterus without opening the abdomen. Furthermore, we know that in the great majority of cases the uterus does contract satisfactorily after delivery and can usually be safeguarded by massage, pituitrin, ergot, or packing.

A review of other statistics giving comparative results of radical and conservative treatment emphasizes the increased mortality associated with accouchement forcé and cesarean section. Appleton¹ advised against cesarean section on account of the patient being a poor surgical risk. He advocates conservative methods of delivery combined with supportive measures.

Frankl and Heiss² reported 34 cases, 16 of which were of the mild type and all patients recovered. Eighteen patients with severe symptoms were treated as follows: two patients by artificial rupture of the membranes; 4 patients by version and extraction; 4 patients by craniotomy and 7 patients by vaginal hysterotomy. There were nine deaths, a mortality of 50 per cent. The mortality in the series, as a whole, was 26.5 per cent.

Williams³ reported 57 cases, of which 10 patients were treated by cesarean section. There were three deaths, all of which occurred in the group treated by cesarean section.

Fitzgibbons⁴ reported 51 cases from the Rotunda Hospital. There were 8 deaths, a mortality of 15.7 per cent. The mortality was classified according to the treatment used, as follows: palliative, 10.7 per cent; packing, 12.5 per cent; cesarean section, 25 per cent; Porro cesarean, 66 per cent.

Brodhead⁵ reported 34 cases of the severe type. There were 9 deaths, a mortality of 26.4 per cent. The mortality was classified according to the treatment, as follows: 8 cesarean sections with 3 deaths, a mortality of 37.5 per cent; 10 versions with 4 deaths, a mortality of 40 per cent.

Goethals⁶ reported 128 cases with 11 deaths, a mortality of 8.6 per cent. Cesarean section was performed in 39 cases, with 6 deaths, a mortality of 15.3 per cent.

The average maternal mortality of the 65 cesarean section cases in the above reports is 22.6 per cent. Manual dilatation of the cervix; internal version and extraction, which may be difficult on account of the rigidity of the uterine muscle; a hard forceps delivery; craniotomy, which may likewise be very difficult, contribute greatly to shock and increased maternal mortality.

It is therefore best to induce labor in both mild and severe cases of

premature separation of the placenta, if pains are not already established, and allow labor to progress naturally throughout, meanwhile instituting such stimulative or supportive measures as may be indicated according to the patient's general condition. Rupture of the membranes and the use of pituitrin will usually bring about satisfactory progress. Breech extraction or low forcep delivery, if decided upon, should be performed with care to avoid all possible trauma. Manual removal of the placenta should not be resorted to unless the Credè method is unsuccessful and the hemorrhage excessive. This should seldom be necessary inasmuch as there is, rather, a tendency to spontaneous expulsion of the placenta. Intrauterine packing should not be used so long as the uterus manifests a reasonably fair state of contraction. For a period of some hours after the third stage, the patient requires the most watchful care, especially to maintain a well-contracted uterus, and to combat the earliest evidences of shock.

It is believed that the above management of premature separation of the placenta will offer the best prognosis, and furthermore, spare future pregnancies and labors the possible consequences of a weak uterine scar.

CONCLUSIONS

1. Premature separation of the normally implanted placenta is often accompanied by a degree of shock which is out of all proportion to the amount of hemorrhage.

2. Shock is more frequent in the cases accompanied by toxemia and is aggravated or precipitated by any trauma sustained during delivery.

3. The high fetal mortality accompanying premature separation of the placenta practically eliminates the fetus from consideration in the choice of treatment, unless delivery can be hastened without additional trauma and danger to the mother.

4. Induction of labor, watchful expectancy, stimulative and supportive treatment, offer the best prognosis. Shock, if present, should be treated first and labor then induced, if pains have not begun.

5. Cesarean section, manual dilatation of the cervix, internal version and extraction, or difficult forcep delivery are associated with an increased maternal mortality, especially in the severe cases.

6. The period of several hours following delivery is one of great danger for the patient and requires watchful care to combat shock or hemorrhage.

REFERENCES

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