PLACENTA PRAEVIA

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THE subject of placenta praevia has been so widely discussed that it is difficult to find a new approach for the postgraduate student. It is important, however, for any student to remember some of the basic facts which are liable to be overlooked when dealing with the wider aspects of this subject.

Signs and Symptoms

Hæmorrhage is of course the symptom that most frequently draws attention to the presence of a placenta praevia. It is usually of sudden onset and may occur when the patient is asleep in bed or carrying out her normal household duties. The amount lost varies considerably but is usually greater in the multipara than in the primigravida. The blood lost is usually bright red and may be associated with the passage of large clots. In the majority of cases the bleeding is painless.

Where the patient complains of pain two things must be considered. First, has the patient had an accidental hæmorrhage either alone or in association with a placenta praevia? Second, has she started in labour? The presence of an accidental hæmorrhage in association with a placenta praevia is nearly always accompanied by abdominal pain and uterine tenderness, particularly if the placenta should lie anteriorly.

The diagnosis of accidental hæmorrhage in association with placenta praevia can be difficult, especially if one has accurately confirmed the presence of the placenta praevia. The association may not be suspected unless there is albuminuria, which has increased following the hæmorrhage, and hypertension. An accidental hæmorrhage due to separation of the portion of placenta implanted in the upper uterine segment is more liable to cause some disturbance of the foetal heart than hæmorrhage from the portion of placenta in the lower uterine segment.

The onset of labour as a cause for the pain is as a rule easily diagnosed by observing the patient for a few minutes, and also by the persistence of the uterine bleeding. In many cases by the time the doctor or midwife arrives with the patient the serious bleeding has ceased and may not recur for weeks. If the uterine bleeding does persist in the absence of pain, even in small amount, one must think of some local cause for the symptom. This

will be dealt with later. On examination of the abdomen the foetus in the majority of cases is lying in the longitudinal axis with the vertex presenting, but may be presenting as a breech or lying in the transverse position.

In a series of patients with placenta praevia recently reviewed in Belfast the baby presented as a vertex in 68%, as a breech in 12.6% and was lying oblique or transverse in approximately 20% of cases.

Even in a polar presentation the presenting part lies high except in those patients with a minor degree of placenta praevia. If the placenta lies anteriorly the presenting part may be partially obscured and can only be recognized on palpation when approached by the palpating hands from each side as in the pelvic grip. When lying posteriorly, as between 60 to 70% do, the presenting part is displaced forwards and may even appear to overlap the symphysis. In a multiple pregnancy if the presenting part of the first baby is not well engaged after 30 to 34 weeks, the presence of a placenta praevia should be suspected even in the absence of hæmorrhage.

Although antepartum hæmorrhage is the most common warning symptom of placenta praevia it has been found, in the series of Belfast cases mentioned above, that in approximately 15% of patients this symptom was absent. In these patients the low-lying placenta is discovered accidentally when dealing with some other complication occurring in that particular pregnancy, for example, when doing a Caesarean section for diabetes mellitus, or when examining a patient before rupturing membranes in the treatment of toxæmia of pregnancy or Rhesus incompatibility. The possibility of a placenta praevia being present must always be considered in any patient with a high free head at or near term, and emphasizes the necessity for careful abdominal and vaginal examination in the appropriate surroundings.

Diagnosis

Many of the points in the clinical diagnosis of placenta praevia have already been made, but the diagnosis can only be confirmed on vaginal examination. Some teachers criticize and do not practise this method of examination, but it is

omission leads to many unnecessary Cæsarean sections. To make the diagnosis it is unnecessary to explore the lower uterine segment, and indeed this can be dangerous, but if the degree of placenta prævia is any but the most minor the placenta can be felt intervening between the head and the examining finger in one or more fornices. If the os is dilated the maternal surface of a major degree of placenta prævia can be gently palpated at the internal os without causing any bleeding.

Except in major degrees of placenta prævia, palpation of the placenta against the soft breech is more difficult than in head presentations. Much is claimed for placentography in cases where the presenting part has remained high and a warning hæmorrhage has not occurred. However, there is a difference of opinion among radiologists as to whether one or four exposures are necessary to demonstrate the situation of the placenta, and some even state that the use of X-rays for this purpose should be abolished. It must be remembered that the majority of obstetricians, particularly those in the underdeveloped parts of the world, must depend on clinical methods as a reliable radiological opinion is not available.

A vaginal examination to confirm the presence of a placenta prævia must not be carried out until as near full-term as possible so as to avoid the complication of prematurity which plays such a serious part in the perinatal foetal mortality.

Differential Diagnosis

The other common cause of antepartum hæmorrhage is of course accidental hæmorrhage. In these cases the presenting part is usually engaged in the pelvic brim, there may or may not be associated proteinuria and hypertension and the uterus may be tender. The patient complains of varying degrees of pain. Even where the amount of hæmorrhage has been small the foetal heart may be seriously disturbed, or even silent. Where there is no associated toxæmia or hypertension there is still a tendency to treat such patients rather casually and perhaps allow them to return home if placentography shows that the placenta is in the upper uterine segment. This is an attitude the writer cannot support but a discussion on this is not relevant here.

Local pathology in the vagina or cervix must be considered as a cause of the bleeding, therefore it is essential that once the bleeding has ceased, or persists only as a blood-stained discharge, a speculum should be passed and the cervix and vaginal walls carefully inspected.

Treatment

It has long been recognized that any patient with antepartum hæmorrhage should be transferred to hospital without any vaginal examination being

made. Observance of this essential part of the treatment can reduce both maternal and foetal mortality. Unfortunately there are still doctors and nurses who do not follow this basic rule and, according to the Report on Confidential Enquiries into Maternal Deaths in England and Wales, in some cases failure to do so has resulted in the patient's death.

At times it may be difficult to convince the patient of the necessity for her further stay in hospital once her bleeding has stopped. One appreciates the many difficulties with which these mothers have to contend, especially if they have left young children at home, but if the consultant in charge will take the time and trouble to have a personal talk with the patient, and seek the aid of an almoner, he is unlikely to fail to convince her of the wisdom of his advice. This advice must be given by the most senior member of the team, not by a house officer or ward sister, although the latter can be of the greatest assistance.

Active treatment depends on the period of gestation at which the patient is admitted. If the patient has reached 37 to 40 weeks, and especially if she is a multipara, arrangements should be made for active treatment. This entails a careful general examination, abdominal palpation to determine the points already mentioned, blood grouping, hæmoglobin estimation and a vaginal examination. The last should be done in an operating theatre with everything prepared for a Cæsarean section.

If the period of gestation is between 30 and 36 weeks expectant treatment plays an important part. If possible, one aims at postponing treatment until 37 or 38 weeks in the hope that the foetal mortality resulting from prematurity may be reduced. While hoping for this one may be forced to interfere at an earlier stage than one wishes on account of persistence of the hæmorrhage, or recurrence of bleeding of such a degree that treatment is indicated.

In either class of patient the type of treatment really depends on the findings on vaginal examination. Undoubtedly, where the patient has had a prolonged spell of expectant treatment one is influenced in favour of a Cæsarean section as the method of treatment most likely to result in a living child. Cæsarean section is indicated in all major degrees of placenta prævia, in posterior placenta prævia of the second degree on account of the risk of prolapsed cord, and where the baby presents as a breech or transverse irrespective of the degree of prævia.

The last indication will probably be seriously questioned but emerges after investigating the results of over 400 cases of placenta prævia. Where a breech or transverse was delivered *per*

vias naturales in even what appeared to be most favourable circumstances the foetal mortality was 42.3%. Those cases delivered by Cæsarean section in similar presentations had a mortality of only 5.7%. This mortality has not been the result of mismanagement of the breech delivery, but is due to the grave risk of interfering with the circulation in the umbilical cord. Eccentric or velamentous insertions of the umbilical cord are well recognized anatomical features of placenta prævia and in many cases where the baby presents as a breech or transverse the umbilical cord is in close proximity to the internal os. In delivering the baby as a breech the cord is compressed resulting in a still birth. The advice to deliver by Cæsarean section does not of course hold when there is an intrauterine death at the time treatment is instituted.

Quite apart from breech presentation, Cæsarean section in placenta prævia is associated with the lowest foetal mortality. Of 163 Cæsarean sections performed for placenta prævia from 1953 to 1960 inclusive, only eight babies were lost, a perinatal mortality of 4.8%. Of those eight babies lost seven were in patients operated on between 28 to 36 weeks. The one baby lost out of 107 Cæsarean sections done after 36 weeks died in the neonatal period. Difficulties associated with Cæsarean section have been discussed in a recent article (Macafee, 1960).

Artificial rupture of the membranes is most suitable for the first degree and perhaps for a second degree placenta prævia if the latter is situated anteriorly.

While one has been rather dogmatic about the value of expectant therapy and the methods of active treatment, it is important to remember that 'every obstetrician must be alive to the environment in which he is practising and the type of patients he is to treat' (Qureshi, 1953). We in the United Kingdom must remember that our hospitals, blood transfusion services etc., are never very far from the patient, while in other parts of the world the same facilities are not yet available. Some readers who come from such areas must recognize that treatment has to vary according to the environment and facilities available. To get expectant treatment accepted and to change the outlook toward Cæsarean section, required time and the education not only of doctors and nurses, but also patients. The same will apply to the underdeveloped areas. In such areas it may still not be possible to adopt expectant treatment and the patient may have to be delivered

at a much earlier stage than one would desire. There may be social and medical reasons for not using Cæsarean section as a method of treatment in such a high proportion of cases as has been described. In such cases version with its associated high foetal mortality may still have to be used to avoid leaving a scar in the uterus to be dealt with by inexperienced attendants at a subsequent confinement.

Improvements

In the 95 years between 1844 to 1939 the foetal mortality rate from placenta prævia remained at approximately 60%, while the maternal mortality fell from 30 to 5%.

Since 1945 the reduction in both maternal and foetal mortality has been gratifying, the maternal mortality in certain series being reduced to nil and the foetal mortality to about 10%. This improvement has been due to several factors of which the following may be regarded as the most important.

Expectant therapy. The number of cases suitable for this varies from hospital to hospital. In Belfast we find that 49.6% in the last 16 years were treated within 72 hours of admission. Of these 71% were over 36 weeks gestation and therefore it was unnecessary to postpone treatment. In approximately half the total patients, treatment could be safely delayed thus improving the outlook for both mother and baby.

Increased use of Cæsarean section. This feature has already been discussed.

Improved resuscitative measures.

Improved paediatric care.

When we read the two recent reports on Confidential Enquiries into Maternal Deaths we cannot be complacent. In England and Wales from 1942 to 1949 inclusive 65 women died during pregnancy, and 330 during or after childbirth, from placenta prævia. In other words, 395 women died during those eight years from a complication which, if properly treated, should be associated with a maternal mortality of almost nil. From the Report on Confidential Enquiries into maternal deaths we find that from 1952 to 1954 29 women died, and in 55% of these cases there were avoidable factors. In spite of all that has been written and taught on the subject the years 1955 to 1957 show little or no improvement as 28 women died in those years, and in 43% there were avoidable factors.

These final figures are my excuse for dealing with some basic facts of diagnosis and treatment which appear to have been overlooked.

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