LABOUR AND ITS OUTCOME IN 53 CASES OF TWIN PREGNANCY

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SUMMARY

A study of 53 twin pregnancies demonstrated the risk of prematurity as 41%. There was an increase in the incidence of abnormal presentations and hence operative deliveries. The deliveries were associated with a higher incidence of postpartum haemorrhage and increased perinatal mortality which was mainly due to prematurity. This study highlights the increased overall risk associated with twin pregnancy.

Introduction

Morbidity and mortality are increased appreciably in pregnancies with multiple fetuses. It is not an overstatement therefore to consider a pregnancy with multiple fetuses to be a complicated pregnancy. The problems of twin pregnancy may manifest during the antenatal period as abortions, maternal anaemia, pregnancy induced hypertension, placental accidents, hydramnios, premature labour and fetal malformations or during labour as prolonged labour, abnormal fetal presentation, cord prolapse, intrapartum deaths and postpartum haemorrhage.

Material and Methods

There were 53 twin pregnancies in a teaching institution with 4681 confinements over a period of 20 months from September 1983 to April 1985 giving an overall incidence of twinning of 1 : 88 or 11.4 per 1000 births.

Thirty-two (60%) of these 53 cases were diagnosed during the antenatal period either by clinical examination, X-ray of the abdomen or ultrasonography. Nineteen (36%) cases were diagnosed at the time of admission of the patient with labour pains and 2 cases (4%) were diagnosed only after delivery of the first twin. Forty-one (77%) of the mothers were multiparas in a population where 75% of the patients admitted in labour were multiparous.

The period of gestation at the time of onset of labour varied between 28 weeks and 41 weeks. The average duration of pregnancy was 36 weeks. Only 31 of the 53 pregnancies continued beyond 37 weeks giving an incidence of prematurity of 41%.

The length of labour was not significantly altered and was 5.5 hours in multiparous patients and 7 hours in pri-

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miparas. Oxytocin was required to augment the pains in 4 cases. Labour was prolonged beyond 12 hours in 2 multiparas and 1 primigravida.

There were many combinations of presentations as shown in Tables I and II.

TABLE I
Combinations of Presentation

Presentation	Incidence	Per cent
Vertex Vertex	24	45.4
Vertex Breech	16	30.4
Breech Vertex	3	5.5
Breech Breech	5	9.4
Transverse Vertex	4	7.5
Transverse Breech	0	0.0
Transverse Transverse	1	1.8

TABLE II
Presentation

Presentation	First baby	Second baby
Vertex	40	31
Breech	8	21
Transverse	5	1

The incidence of the various presentations of the first and second baby are as shown in Table II.

Thirty-five of the twins were of the like sex, while 18 were of unlike sex.

The incidence of LSCS was 4 in the 53 cases i.e. 7.5%. Of these 3 were for the second twin—two of which were for transverse lie and hand prolapse and 1 for cord prolapse. One LSCS was done for fetal distress.

The incidence of forceps or vacuum extraction was 10%, 5 for the first twin and 5 for the second twin.

One internal podalic version was performed for a second of the twin weighing 1.3 kg and presenting by the shoulder.

Craniotomy was carried out on 1 baby with hydrocephalus. The second baby was a transverse lie and required a LSCS. The mode of delivery in the 53 cases is as given in Table III.

TABLE III
Mode of Delivery

Mode of delivery	First twin	Second twin
Spontaneous vaginal	38	24
Breech	8	21
Forceps/Vacuum	5	5
LSCS	1	3
Destructive (Craniotomy)	1	0

The average time interval between the delivery of the 2 babies was 20 minutes in this study group.

The average birth weight amongst the 106 babies was 1.95 kg. Only 22% of the babies weighed 2.5 kg or more. The average weight of the first of the twin was 2.2 kg and of the second twin was 1.8 kg.

Low Apgar scores (< 4) were more common amongst the second twins (6 out of 53) as compared to the first twin (2 out of 53).

Postpartum haemorrhage occurred after 12 of the 53 deliveries and was severe requiring transfusion in 4, i.e. 7.5%.

Thirty-three of the 106 babies died during the perinatal period giving a perinatal mortality of 31%. The cause of death is as shown in Table IV.

TABLE IV
Causts of Death

Cause of death	Number	Per cent
Prematurity	25	76.0
Asphyxia neonatorum	4	12.0
Septicaemia	2	6.0
Congenital malformations	1	3.0
IUFD	1	3.0

Nineteen (58%) of the babies lost were the second of the twin.

Discussion

The incidence of twinning varies in different populations. In 10 to 12/1000 births amongst Caucasians, 6.4/1000 in Japan whereas in Nigeria the incidence is very much higher at 40/1000 (Macgillivray 1980). Our incidence of 11.4/1000 births is similar to the incidence of 12.8/1000 births in a study carried out in a medical college in Solapur (Sholapurker, 1983).

Fourteen babies (22%) were lost when the presence of multifetal pregnancy was diagnosed in the antenatal period. Seventeen babies (40%) were lost when the diagnosis was made after the onset of labour and 2 babies (50%) were lost when the diagnosis was made after the delivery of the first child. This highlights the value of early diagnosis and adequate antenatal management of twin pregnancy in reducing the perinatal mortality.

In our study there was no increase of twinning with increasing parity.

By gestational age a baby born before 37 completed weeks is regarded as premature. The average period of gestation at the time of onset of labour was 36 weeks and 41% of the patients delivered prematurely by gestational age. The incidence of prematurity varies in different studies from 38.8% in the study carried out at Solapur to 29% in a study carried out in Finland (Koivisto *et al*, 1975). All reports agree that prematurity is the greatest threat to twins and carries with it a high perinatal mortality. Premature labour occurred more frequently in primigravidas—6 out of 12 (50%) than in multiparas 16 out of 41 (39%).

The length of labour in our study was comparable to that in singleton pregnancies. Friedman and Sachtleben (1964) found that there was a significantly greater amount of cervical dilatation before labour in twin pregnancies, thus shortening the latent phase, although there was a tendency to lengthening of the active phase as compared with singleton labours.

Instrumental or manipulative deliveries and LSCS are more frequently necessary in twin deliveries because of malpresentations and malpositions. It is evident from Table I that some form of abnormal presentation, either breech or transverse of one or other or both babies will occur in 30% of twin deliveries.

The incidence of LSCS in our study was 7.5% as compared to 5.5% in the general population. The incidence of forceps delivery or vacuum extraction was 10% as compared to 5% in our general obstetric population. The need for operative interference of 16% for the second of the twins was slightly higher as compared to 11% for the first. The overall incidence of operative delivery in twin pregnancy in our study was nearly 20% as compared with 10% in the general obstetric population.

In our study, the average interval between the delivery of the first and second babies was 20 minutes though it varied from 3 minutes to 90 minutes. All studies have conclusively shown that there is an increase in the perinatal mortality with increasing interval though this was not evident in our study.

The average birth weight amongst the 106 babies was 1.95 kg as compared to 2.65 kg in our general obstetric population. The average weight of the first twin of 2.2 kg was more than the average weight of 1.8 kg of the second twin. The lower birth weight was partly due to the

effect of prematurity and partly due to the IUGR which is commonly seen in twin pregnancies. Marivate and Philpott (1981) showed that IUGR (< 10th percentile mass for gestational age) was present in 28.5% of all multiple pregnancies. Only 22% of the babies in this study weighed more than 2.5 kg as compared to 60% of the babies in the general obstetric population.

The second twin shows a higher propensity for low Apgar scores. This is probably related to the higher incidence of breech and other operative deliveries associated with the second of the twin, 5 of the 6, second of the twins with low Apgar scores were delivered as breech and the 6th by forceps.

Postpartum haemorrhage following twin delivery occurred in nearly a quarter of the case (22%). One-third of these cases were severe enough to require blood transfusion.

While all reports agree that there is a higher perinatal mortality with twin pregnancy as compared with singletons, the rates quoted vary from 9.2% (Little and Freidman) to 28.1% (Mannell and Tayla 1946). In a recent study in Aberdeen there were 54 deaths in 642 twins giving a rate of 8.4% (MacGillivray and Campbell 1980). The high perinatal mortality and increased risk of handicap is in part due to the frequency of premature labour but also partly to some degree of IUGR being present. Moreover, there is no doubt that the increased incidence of operative deliveries too play a part in adding to the perinatal mortality.

In our study the perinatal mortality of 31% was significantly greater than the 14% in our general obstetric population. 76% of the perinatal deaths were due to prematurity. The incidence of congenital malformations (1 in 106) was no higher than in the general obstetric population. Perinatal mortality in the second of the twins was slightly more than for the first twin. 58% of the perinatal deaths occurred in the second of the twin as compared to 42% in the first twin. This is partly due to the lower birth weights, abnormal presentations, increased operative delivery, premature separation of the placenta and cord prolapse that occurs more commonly in the second twin.

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