Outcome of Twin Pregnancies in a Nigerian Teaching Hospital

Dr. Oluwafemi Kuti, Dr. Alexander T. Owolabi, and Dr. Olusola B. Fasubaa
Department of Obstetrics, Gynaecology and Perinatology College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria.

Abstract

Context: Twin pregnancies continues to generate significant anxiety for both obstetrician and mothers. There is therefore a need to assess the current risk involved in twin pregnancies in view of recent improvement in perinatal care facilities
Objective: To assess the current outcome of twin pregnancies in a Nigerian Teaching Hospital.
Study Design, Setting and Subjects: This is a descriptive cross-sectional study of all twin pregnancies, among booked mothers, who delivered at Wesley Guild Hospital, Ilesa, Nigeria between January 1997 and December, 2003.
Outcome Measure: Main outcome measures were maternal complications, and gestational age at delivery, babies' birth weight and apgar score at birth.
Results: The incidence of twins among booked mothers was 35.7 per 1000 deliveries. During the antenatal period, 62 (43.67%) of the 142 twin pregnancies developed complications and 27.87% of the 122 mothers who laboured had intrapartum complications. The commonest antenatal complications were prelabour rupture of fetal membranes (9.86%), preterm contractions (7.75%) and pregnancy induced hypertension(6.35%), while the commonest intrapartum complication were failure to progress(11.48%), and primary postpartum haemorrhage (7.38%).
The mean gestational age at delivery was 36 weeks (SD=3.69), 41.36% delivered preterm (<37 weeks) and 13.54% delivered before 34 weeks gestation.
Out of the 284 babies 155 (54.58%) were low birth weight (<2.5 kg), 94 (33.10%) were asphyxiated and 9 (3.16%) were stillborn. There were no significance differences between the first and second twins in their mean birth weight and apgar scores at birth.
Conclusion: Despite improved prenatal and intrapartum care facilities twin pregnancies are still associated with significant fetomaternal morbidity.

Key Words: Asphyxia, Low Birth Weight; Outcome; Twin Pregnancy [Trop J Obstet Gynaecol, 2006, 23:133-136]

Introduction

Nigeria has long been recognized for a high incidence of multiple pregnancies[1]. This is particularly so in the Southwestern part of the country with a reported incidence as high as 40 per 1000 deliveries[2,3]. Wesley Guild Hospital is located in Ilesa, a core town in Southwest Nigeria with a high incidence of twining. This gives a good opportunity for a detailed study of the problems of twin pregnancy in a suburban setting.

The general improvement in obstetric services and perinatal care has led to improved outcome in many high risk obstetric situations. It is therefore important to assess the current outcome of multiple pregnancies in the light of improved perinatal care. This study aims to assess the outcome of twin pregnancies for an up-to-date assessment of the risk involved. This information will help in counseling the mothers and help identify areas that require special attention.

Materials and Methods

All mothers with twin pregnancies who received antenatal care and delivered at Wesley Guild Hospital, Ilesa, Nigeria between January 1997 and December 2003 were the subjects of this study. The mothers were identified from the labour ward register. Their case notes were retrieved and analyzed to obtain information on details of maternal demography, complications during pregnancy, labour and delivery, babies' birth weight and apgar score at one minute.

Data analysis was by SPSS version 11. Tests of significance was by the student t or ^{2} test as applicable and the level of significance was set at $P<0.05$.

In our unit all cases of multiple pregnancies have ultrasound at booking to date the pregnancy, determine chorionicity and identify gross fetal anomalies. Mothers are subsequently seen every two weeks until 28 weeks and weekly thereafter. Fetal growth is routinely monitored by serial ultrasound scan. Mothers are informed of signs and symptoms of threatened preterm labour and are advised to present early if this occurs. No specific prevention of preterm labour is practiced in our centre.

Twin delivery is routinely undertaken by the Senior Registrar on duty with the anaesthetist and Paediatrician in attendance.

Correspondence: *Dr. O. Kuti, Department of Obstetrics, Gynaecology and Perinatology, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria*
E-mail: *okuti_victory@yahoo.com*

Results

The total number of deliveries during the study period was 5,752 out of which 245 were twins (rate: 42.59/1000 deliveries) and 13 were higher order multiple pregnancies. Of the 5, 752 total deliveries 1134 (19.71%) were unbooked (emergency referrals) and 4,618 (80.29%) were booked mothers.

There were 165 twin deliveries among the booked mothers and 80 among unbooked mothers giving an incidence of 35.73/1000 and 70.55/1000 deliveries respectively.

Out of the 165 twin deliveries among the booked mothers, 142 case notes (86.06%) were available for review and analyzed. The mean age of the mothers was 29.39 (SD = 4.99). Table I shows details of the age and parity distribution of the mothers. During the antenatal period 62 (43.67%) of the 142 twin pregnancies developed complications and 34(27.87%) of the 122 mothers who laboured had intrapartum complications. Table 2 shows the details of the antenatal and intrapartum complications. The Caesarean section rate among the twin mothers was 27.46 percent. Table 3 shows the indication for Caesarean section. There was no instrumental vaginal delivery.

The gestational age could not be determined with certainty in 9 of the mothers. Among the 133 whose gestational age was ascertained, the mean gestational age at delivery was 36.45 weeks (SD = 3.69). Fifty five (41.35%) of these mothers had preterm delivery and 18 (13.53%) delivered before 34 weeks gestation. Table 4 shows details of the gestational age at delivery.

Out of the 284 babies 158 (55.63%) were low birth weight (<2.5kg), 94 (33.10%) were asphyxiated and 9 (3.14%) were stillborn. There were no significant difference between the mean birth weights of the first and second twins(First twins 2.34kg SD=0.62; 2nd twin 2.44kg, SD=0.64; P> 0.05). Table 5 shows details of the birth weight distribution. More babies among the second twin had birth asphyxia (Apgar at 1 < 7) (37.32%vs28.87%) but the difference was not significant. (^{2} = 2.29 P = 0.13).

Discussion

The rate of twining is still high in Southwest Nigeria. Despite improvement in Obstetric care twin pregnancy remain a high risk pregnancy with high incidence of maternal and fetal complications

The study was limited to patients who received antenatal care and delivered in our unit (Booked patients) as they are the ones who have taken full advantage of the available perinatal care facilities. Unbooked mothers (emergency referrals) were excluded, as they were usually victims of substandard

Table 1
Age and parity distribution of mothers

	No	%
Age		
<20	1	0.7
20-34	116	81.69
>=35	25	17.61
Parity		
0	31	21.83
1-4	99	69.72
>=5	12	8.45

Table 2
Antenatal and Intrapartum Complications

Complication	No	%
A. Antenatal		
PROM	14	9.86
Preterm Contractions	11	7.75
PIH	9	6.33
Malaria	6	4.23
Anaemia	5	3.52
UTI	5	3.52
APH	3	2.11
Postdate	3	2.11
Fetal Distress	2	1.41
Hyperemesis	1	0.70
Miscellaneous	3	2.11
Nil	80	56.34
B. Intrapartum		
Failure To Progress	14	11.47
1^0 PPH	9	7.38
PIH	6	4.92
Fetal distress	2	1.64
Cord Prolapse	1	0.82
Retained 2nd Twin	1	0.82
Retained Placenta	1	0.82
Nil	88	72.13

Note: only 122 mothers went into spontaneous labour and were those analyzed for intrapartum care.
PROM = Prelabour Rupture of Membranes
PIH = Pregnancy Induced Hypertension
UTI = Urinary Tract Infection
APH = Antepartum Haemorrhage
1^o PPH = Primary Postpartum Haemorrhage.

Table 3
Indications for Caesarean section

Indication	No	%
Malpresentation of first twin	15	10.56
Failure To Progress	11	7.75
Fetal Distress	2	1.41
PIH	3	2.11
APH	2	1.41
Previous c/s x 2	2	1.41
Cord Prolapse	1	0.70
Failed Induction of Labour	2	1.41
Retained 2nd Twin	1	0.70

Table 4
Gestational age at delivery

Gestational Age	No	% of total
<28	4	3.01
28 30	8	6.02
31 33	6	4.51
34 36	37	27.82
>= 37	78	58.64

Note: gestational age unknown in 9 cases.

Table 5
Birth weight distribution of the Twins

Birth weight (kg)	Twin 1	Twin 2	Test of Significance
Mean	2.34 (0.62)	2.44 (0.64)	t = 1.26
			df = 282
			P = 0.208
<1.5 kg	11 (7.75)	15 (10.56)	
1.5 1.99	19 (13.38)	29 (20.42)	^{2} = 3.75
2.0 2.49	46 (32.39)	38 (26.76)	df = 3
>= 2.5	66 (46.48)	60 (42.25)	P = 0.29

care with consequent poor outcomes[4,5]. Their exclusion therefore will give a true picture of the effect of the modern care facilities on the outcome of the pregnancies.

Another limitation of this study is the small sample size. We were unable to extend the period of study beyond five years because of the difficulty in data retrieval. However, since we are interested in the current outcome of twin pregnancy a retrospective 5year review from the date of study will be representative.

The twining rate of 42.59/1000 deliveries found in this study was similar to that reported by other authors working in the same area[2,3]. This is however higher than those reported from other parts of the country where rates are between 14.4 and 28 per 1000 deliveries[6,7]. It is also much higher than the twining rates reported from the Western World despite the reported increase in twining in these countries due to ovulation induction[8].

More than 40% of the mothers developed complications during pregnancy, and more than a quarter had intrapartum complications. Multiple pregnancies therefore remain a high-risk obstetric situation despite improved perinatal care. This agrees with the observation of other authors even in advanced countries with more sophisticated perinatal care facilities[9].

With an incidence of more than 40%, preterm delivery still remains the bane of twin pregnancies. The mean gestational age at delivery and the preterm delivery rate found in this study is similar to that reported by other authors[10,11].

We did not find any difference in outcome between the first and second born twins. This is similar to the findings of El-Jallad et al[12] but differs from that of Prins[13] who found the second twin at increased risk. The latter however attributed the increase risk to birth weight differences. We however found no difference in the mean birth weight of co-twins. This probably explains the similarity in the outcome of the first and second twins in our study.

The high-risk status traditionally ascribed to multiple pregnancies has not changed despite improved perinatal care facilities. Patient should be educated on the risk involved and the need for care in tertiary centres. Even in these centres some perinatologist have advocated restriction of management to a single consultant unit in order to improve perinatal outcome[14].

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