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RETAINED SECOND TWIN: EXPERIENCE FROM ILE-IFE, NIGERIA
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ABSTRACT

***Background*: Retained second twin contributes significantly to perinatal morbidity and mortality, as well as maternal morbidity and mortality, usually arising as a result of intervention to salvage the retained foetus.**

***Objective*: *To* review the current incidence, management, fate and outcome of both the retained foetus and its mother, with a view to proffering solution.**

***Design:* Retrospective review over a 12 year period from January 1988 to December 1999.**

***Setting:* Obafemi Awolowo University teaching hospital, Ile Ife, Nigeria.**

***Subjects:* All cases of retained second twin managed during this period.**

***Main outcome measures:* Causes, sources of referral, perinatal and maternal complications.**

***Results:* The incidence is still high (7.9%). Majority of the patients were referred from rural centers (49.6%) and in poor fetal conditions (41.9%). The fetal survival in patients that presented within two hours of delivery of the first twin was 74.2%. The perinatal and maternal mortality were 47.3% and 3.9% respectively.**

***Conclusion*: The incidence and associated maternal and fetal complications of retained twin is still rather high. Therefore, irrespective of the antenatal course and early labour findings, the conduct of twin deliveries must be in a well-equipped health institution with adequate staff. There should also be an efficient referral system for occasional emergencies from the peripheral centres.**

INTRODUCTION

Although twin babies are smaller than singleton and are less likely to produce feto-pelvic disproportion, the high incidence of abnormal lie and malpresentation or mismanagement of third stage causes the retention of the second twin after the delivery of the first twin(1).

The second twin is retained if the interval between the delivery of the first and second twin exceeds 30 minutes(1-4). It contributes significantly to the high perinatal and maternal morbidity and mortality in the third world(2-4). While the poor perinatal outcome is a direct consequence of intrapartum hypoxia, cord accidents or placenta abruptio, maternal injuries are mainly as a result of interventions to salvage the second twins.

This study was conducted to review the incidence, management and outcome of retained second twin in lle-Ife, Nigeria. Since our center serves the Yoruba states of southwestern Nigeria where twining has the highest incidences, conclusions made thereof are likely to be more representative than other studies elsewhere.

MATERIALS AND METHODS

All cases of retained second twin managed at the two hospitals of Obafemi Awolowo University Teaching Hospital complex, lle-Ife, Nigeria (Wesley Guild Hospital, llesha and Ife State Hospital lle-Ife) over a 12year period (January 1988-December 1999) were identified from the labour ward register.

Their case records were retrieved from the medical records library and reviewed with particular references to maternal socio-demographic parameters, place and time of delivery of the first twin, time, route and method of delivery of second twin. Also noted were the intrapartum and postpartum complications, fetal and maternal outcome.

All data obtained were coded and fed into IBM compatible PC for analysis using the EPI-info statistical package.

RESULTS

During the period under review, 1625 women were admitted into the labour ward and labour ward emergency rooms of our hospital as a result of twin deliveries or its complication. One hundred and twenty nine cases were cases of retained second twin, accounting for 7.9% of all twin deliveries. All reproductive age and parity groups were involved; majority were unbooked (86.8%) and of low socioeconomic status (82.9%) (Table 1).

Table 1

Sociodemographic characteristics of the patients that presented with retained twins

Characteristics	No. (%)
Age(years)	
≤ 20	15(11.6)
21-25	34(26.4)
26-30	40(31.0)
31-35	47(36.4)
36-40	13(10.1)
> 40	
Range = 18-40	
Parity	
1	25(19.4)
2	15(11.6)
3	15(11.6)
4	32(24.8)
5	27(20.9)
6	15(11.6)
Social class ψ	
I	3(2.3)
II	5(3.9)
III	14(10.9)
IV	36(27.9)
V	71(55.0)
Booking status	
Booked	17(13.2)
Unbooked	112(86.8)

ψ Olusanya classification-1989.

While only 30 (30.2%) cases were delivered preterm, majority (69.8%) delivered at term. Sixty four (49.6%) were referred from primary health center and maternity centers and 23(17.8%), 17(13.2%), nine(7.0%) and three(2.3%) from patient's home, mission houses, private clinics and general hospital respectively. Only 11 (8.5%) patients delivered in our hospital.

At presentation, fetal heart tones were heard in 93(72.0%) cases, but before delivery could be effected in 18 (14.0%) patients fetal heart tones could not be heard. Of the 75 (58.1%) babies that were delivered alive, 19 (25.3%) were admitted into neonatal intensive care; ten had severe birth asphyxia, four had low birth weight, six were premature, two had neonatal sepsis and two had anaemia. Seven (5.4%) neonatal deaths occurred and 68 (52.7%) babies were discharged home. The perinatal mortality and still birth rates of the second twins were thus 47.3% and 41.9% respectively. Further analysis of the perinatal deaths showed that 57(93.4%) of the deaths occurred among the cases referred from the mission houses, primary health care centers, maternity centers or those delivered at home. Thirty-five (57.4%) perinatal deaths occurred among the patients that arrived the hospital after four hours of delivery of the first twin (see Table 3).

Intrapartum complications associated with second twin included intrauterine death in 54 (41.9%) cases, malpresentation in 27 (20.9%), fetal distress in 28 (21.7%), abruptio placenta in five (3.9%), abnormal lie in 67 (51.9%), compound presentation in three (2.3%) and cord prolapse/presentation in eight (6.2%).

Table 2

Comparison of foetal survival and place of delivery of first twin

Foetal Status	Place of delivery of the first twin						
	PH(%)	MH(%)	PHCC(%)	MC(%)	PC/H(%)	G/SH(%)	OAUTH(%)
Alive	9(39.1)	8(47.1)	17(41.5)	13(56.5)	6(66.7)	3(75.0)	11(100.0)
Dead	14(60.9)	9(52.9)	24(58.5)	10(43.5)	3(33.3)	1(25.0)	0(0.0)
Total	23(100.0)	17(100.0)	41(100.0)	23(100.0)	9(100.0)	4(100.0)	11(100.0)

PH = patients' home
MH = mission house
MC = maternity centre
PHCC = primary health care centre
PC/H = private clinic/hospital
G/SH = general/state hospital
OAUTH = Obafemi Awolowo University Teaching Hospital.

Table 3

Comparison of foetal survival and time interval between the delivery of first and second twin

Foetal	Interval between delivery of the first and second twin (Minutes)				
Status	<60	60-120	121-240	241-360	>360
Alive	7(87.6)	16(69.6)	32(64.0)	6(31.6)	7(24.1)
Dead	1(12.5)	7(30.4)	18(36.0)	13(68.4)	22(75.9)
Total	8(100.0)	23(100.0)	50(100.0)	19(100.0)	29(100.0)

Time range: - 30 minutes - 147 hours.

The mode of delivery of the retained twin was by caesarean section in 74(61.2%) cases, laparaotomy in five (3.9%) cases, spontaneous vaginal delivery in 19(14.7%), breech extraction in 13 (10. 1 %), assisted breech delivery in 10(7.8%), vacuum extraction in five(3.9%), forceps delivery in two and destructive operation in one case. Five patients had external cephalic version and vaginal delivery. Of the 13 patients that had breech extraction, six had internal podalic version prior to breech extraction.

The indications for Caesarean section were transverse lie in 35 (47.3%), hand prolapse in 15 (20.3%), breech presentation in 12 (16.2%), cord pro lapse/presentation in eight(10.8%) and previous caesarean section in four(5.4%) cases.

Maternal complications occurred in 44 (34.1%) patients, with 21 patients having more than one complication. The commonest complication was postpartum haemorrhage in 23 (17.8%) patients. In 15 patients the bleeding was serious enough to warrant blood transfusion. Other maternal complications were ruptured uterus(5), genital tract laceration(7), operation wound infection(10), puerperal sepsis(16), and post partum anaemia(6). Three maternal deaths occurred as a result of irreversible hypovolaemic shock from ruptured uterus.

DISCUSSION

The 7.9% incidence of retained second twins recorded in this review is low compared to 13.7% reported by Ogunniyi, *et al.* earlier in the hospital(2). The factors responsible for this decreased incidence could be related to the increased awareness about the dangers of delivery of twin pregnancies in centers not equipped to handle emergency obstetric cases, improvement and the provision of more health care facilities and the upgrading of more hospitals to general hospital status in the rural areas to such level to be able to manage limited obstetric emergency cases and the early referral of complicated cases. This study confirms this development; perinatal mortality rate was 25% for the cases referred from the general hospital compared to more than 33.3% from the other centers.

As in previous studies most of the cases were in the poor socioeconomic group who could either not afford quality care or had cultural restraints to hospital delivery; they only present when complications develop(5,6).

Because of late referral, delayed presentation and delay within the system as reported in other studies(2,3,7) the fetal outcome was poor (47.3%) when compared to 38.5% reported by Lassey *et al.*(1), but an improvement on earlier report of Ogunniyi *et al.*(2).

In this study, of the 93 fetuses that were alive at presentation 18 died before delivery as a result of delay within the hospital itself. Onwudiegwu *et al* confirmed in their study that delays within the hospital are a major contributor to high maternal and perinatal morbidity and mortality in our environment(7). Until these institutional delays are addressed maternal and perinatal morbidity and mortality will continue to be high. Resolving these problems entails the efficient transfer of patient from the reception desk to the obstetric emergency room, removal of hospital charges in emergency situations, early mobilisation of appropriately trained staffs, addressing the chronic shortage of water, energy supply, blood banking services and essential drugs(1,5-7).

The high Caesarean section rate of 61.2% recorded is not unexpected because of high incidence of abnormal lie, fetal distress and malpresentation in the second twin. Though version was done in eleven patients, where appropriate and indicated it should be performed in order to reduce caesarean section rate, since it has been shown that aversion to Caesarean section is a major reason why patients avoid hospital delivery. Moreso, complications in Caesarean section are more in unbooked patients and emergencies(5). Our study series also confirms this.

This study like other studies(2-4) showed that maternal complication in retained second twin is not only serious but could cause maternal death. The maternal morbidity of 34.1 % and mortality of 3.9%

is unacceptably high for a university hospital. To stem this ugly tide public enlightenment on the dangers of twin delivery in inappropriate places should be embarked on since twin delivery is common in our environment. The importance of simple diagnostic tools like symphsio-fundal height measurement in detection of macrosomia and multiple pregnancies should be emphasized. Efficient referral system should be put in place as back up for the occasional misadventure.

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