

LATE ARRIVAL IN HOSPITAL DURING LABOUR; ANY CORRELATION WITH MATERNO-FOETAL OUTCOME? THE STATE SPECIALIST HOSPITAL, ASUBIARO, OSOGBO EXPERIENCE.

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ABSTRACT

Background: Late arrival in labour is a common occurrence in my centre. It has been said to be associated with poor maternal and foetal outcome because of the lack of intrapartum materno-foetal monitoring. It gave me a great concern why booked patients should deliver in vehicles in 21st century.

Objectives: Is to determine the relationship between late arrival in Hospital during labour and materno-foetal outcome, and to explore the reasons for the late presentation in labour.

Materials and Methods: It is a prospective observational study. All the patients that presented in second stage of labour (Cervical dilatation of 10cm) and those that delivered in vehicles on their ways to the hospital between February, 2013 to January 2015 were recruited into the study. The mothers and their babies were followed up, till the first 7 days postpartum. The total number of patients, recruited in to the study were 227. The outcome measures were; birth asphyxia, early neonatal deaths (ENND), fresh still births (FSB), special care baby unit (SCBU) admissions, primary postpartum haemorrhage (1^o PPH), blood transfusion, genital lacerations, delivery in vehicles and retained placenta.

Results: The total number of patients recruited into the study were 227, 196(86.34%) were booked, while 31(13.66%) were unbooked patients. Fifteen (6.61%) delivered in vehicles before arrival in the hospital, while 212 (93.39%), delivered within 45 minutes of presentation in the Hospital. Majority of the patients 145 (63.87%) were between age 25 and 34 years and were mostly of the social class III,[151 (66.52%)]. Interestingly most of the patients (218; 96.4%) ascribed the reason for arriving late in labour to avoiding long period of stay in labour, in the hospital to prevent unnecessary obstetrics interventions by health care providers.

Conclusion: The fear of "unnecessary" obstetric interventions in labour and the previous positive experience in vaginal deliveries were the main reasons for late presentation in labour in this study. The incidences of birth before arrival, birth asphyxia and genital lacerations, fresh still births were quite high in these patients. The confidence or trust of the patients towards the health care providers should be well established and sustained during the antenatal care period, so that the patients see the health care givers as companions during labour and not just accoucheurs.

Keywords: Social Class, Birth Before Arrival (BBA), Apgar Score, Perineal tear, Early neonatal deaths (ENND), Fresh still births and Intrapartum eclampsia, Primary Postpartum Heamorrhage.

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INTRODUCTION

Labour is the sequence of uterine contractions that results in the effacement and dilatation of the cervix and bearing down efforts, leading to the expulsion of the products of conception per vaginam. Delivery is the mode of expulsion of the foetus and placenta. Labour and delivery are normal physiologic processes that most women experience without complications.^{1,7}

Labour is divided into 3 stages, the first stage is the onset of labour to full cervical dilatation, the second stage is the period of full cervical dilation to the delivery of the infant and the third stage is from the delivery of the foetus to the delivery of the placenta.^{1,6}

However, because of the complex of interplay of different physiologic, physical and social factors during labour, there may be deviations from the normal physiologic processes, which will require urgent interventions to save the lives of either the foetus or the mother or even both. These may include abnormal lie or presentations, intrapartum haemorrhage, intrapartum pre-eclampsia or eclampsia, foetal distress or any other obstetric factors that may affect labour outcome. Hence, the importance of intrapartum materno-foetal monitoring can not be over emphasized to identify these problems and intervene promptly.^{1,8}

Unfortunately, many of the parturients in this centre present in second stage labour or even deliver in vehicles before their arrival in the Labour Ward. This prompted the need to study and identify the reasons for the late presentation and the possible maternal and foetal complications that may arise from this late arrival in labour.

MATERIALS AND METHODS

This prospective observational study was carried out in the State Specialist Hospital, Asubiaro, Osogbo, Osun State, Nigeria, between February 2013 and

January 2015. All the patients that presented in second stage of labour (Cervical dilatation of 10cm) and those that delivered in vehicles on their ways to the Hospital were recruited into the study. The mothers and their babies were followed-up from presentation till the first 7 days postpartum. A total number of 227 patients were recruited into the study. The patients were assigned to social classes taken into consideration the patients' and their spouse level of education.⁹ This is because a woman's social status or class is directly dependent on the summation of both her educational level and that of her husband's educational and financial status.⁹

The outcome measures were; birth asphyxia early neonatal deaths (ENND), fresh still births (FSB), Special care baby unit (SCBU) admissions, primary postpartum haemorrhage (1^o PPH), blood transfusion, genital lacerations, retained placenta, and delivery in vehicle before arrival in the hospital. The patients were adequately counseled and an informed verbal consent obtained from them before recruitment into the study. However, in view of the short presentation-delivery interval, many of these obstetric data sheets were completed after delivery, when informed consent has been taken from the parturients.

The socio-demographic data, parity, number of antenatal clinic visits, gestational ages at booking and delivery, presentation-delivery interval, maternal and foetal outcomes were documented in structured obstetric data sheets. The data were subjected to statistical analysis with a personal computer using SPSS version 20.0.

RESULTS

Two hundred and twenty seven parturients were recruited into this study. Of these, 196(86.34%) patients were booked and 31(13.66%) were unbooked. The mean maternal age was 29.01±4.41 years (range; 15-40 years), The majority

of these patients, 145(63.87%) were between the age 25 and 34 years and were mostly of the social class III, 151 patients (66.52%). Most of these patients, 177(77.97%) were of parity 1 to 4, 48(21.15%) were nulliparous and only 2(0.88%) were grand multiparous women. The mean parity was 1.59+1.06 (range 0-5) Table 1.

In this study, 220(96.92%) has singleton pregnancies, while 7(3.08%) had twin gestations. The mean gestational age at booking was 29.52+3.08 weeks (range: 15-40 years), while the mean gestational age at delivery was 39.07+1.12 weeks (range: 33-43 weeks). Two hundred and fifteen (94.71%) of the women delivered at term, 1(0.44%) had post term delivery and 11(4.85%) has preterm deliveries. These showed that most of the deliveries were not unexpected. Table 1.

When the reasons for presenting late in labour was evaluated, 218(96.04%), presented late in the hospital to avoid long period of stay in Labour Ward to prevent unnecessary obstetric interventions, 4(1.76%) were waiting for their husbands and 5 (2.20%) were due to transportation problems.

The mode of deliveries in their last pregnancies showed that, 176 (77.53%) had spontaneous vaginal deliveries, 3 (1.32%) had caesarean sections for a non-recurrent indications, while 48(21.15%) patients were nulliparous. None of the women had instrumental vaginal delivery in their last deliveries.

Majority of the patients, 202(88.99%) were in labour for more than 10 hours before presentation, only 25(11.01%) presented with history of labour of less than 10 hours duration. Table 2.

The mean arrival-delivery interval in the Labour Ward was 18.68+4.30 minutes (range: 10- 45 minutes), 9(3.97%) delivered in less than 15 minutes, 198 (87.22%) delivered between 15 and 30 minutes and 5(2.20%) delivered between 31 and 60 minutes of arrival in the hospital. However, 15(6.61%) delivered in the vehicles on their ways to

the Hospital, and their placentae delivered in the Labour Ward. Table 3.

The mean birth weight was 3.07+0.41kg, 35(15.42%) of the babies had birth asphyxia, 6(2.64%) had fresh still births, 2 (0.88%) had early neonatal deaths, 6(2.64%) babies were admitted into special care baby unit, while 141(62.11%) of the women had genital lacerations and 7(3.08%) had primary postpartum haemorrhage. Table 4.

Two (0.88%) of the women had intrapartum eclampsia and were managed accordingly. They both spent 4 days each in the Hospital.

DISCUSSION:

Labour and delivery are normal physiologic processes that most women experience without complications. However deviations from the normal physiologic processes may occur, that if not detected early and appropriate interventions instituted immediately, would results in adverse maternal and foetal outcome.^{1,2}

In view of these deviations, intrapartum maternal and foetal monitoring is highly essential to prevent maternal and perinatal morbidities and mortalities.^{1,2,5,10,11,12,13} Approximately 75% of nulliparous and 90% of multiparous women have normal labour and deliver vaginally. The rest will have labour abnormalities in any of the stages or phases of labour.¹⁴

In this study, the patients received no intrapartum care, because they decided not to seek obstetric care, a type 1 delay that accounts for a significant proportions in the causes of maternal mortality.^{15,16,17}

Reports from Benin-City and Ife quoted values of 28.6% and 40% of the maternal mortalities in these centres resulting from this type of delay.^{16,17}

Fortunately, no maternal mortality was recorded in this study.

Interestingly, most of these women were booked (196; 86.24%), and at least were of social class III

(159; 70.04%). Thus the antenatal health education programme or their social classes did not affect their attitude and perception towards intrapartum care. Conversely many of these patients had previous positive experiences of vaginal deliveries and believed that they did not require any form of intrapartum care.

Majority of the parturients, 202(88.99%) were in labour at home for more than 10 hours and most of them delivered within 30 minutes of arrival in Labour Ward, while 15(6.61%) delivered in vehicles. They had no intrapartum monitoring, with no adequate preparation for their deliveries and no neonatal resuscitation, hence the poor maternal and perinatal outcomes.

In this study, 138(60.79%) of the patients had perineal tear, and 3(1.32%) had cervical lacerations. These are common features of unsupervised and poorly controlled deliveries and has been reported to accounts for about 20% of the causes of primary postpartum haemorrhage, a value much lower than what we recorded in this study.¹⁸

Other poor outcomes observed in this study were; birth asphyxia, 35(15.42%), fresh still births 6(2.64%), special care baby unit (SCBU) admissions 6(2.64%) and early neonatal deaths 2(0.88%). All these are pointers of poor or lack of intrapartum foetal monitoring.^{11,12,13} Fawole et al and Bailey documented that perinatal mortality rates depend on the quality of intrapartum care received by a parturient.^{12,13}

In this study, most of the parturients ascribed the late presentation in labour to avoidance of long period of stay in Labour Ward to prevent unnecessary obstetric interventions. This implies that the patients see Obstetricians as mere accoucheurs who derives joy or gain in operative interventions and not as companions in labour. Thus the antenatal health education programme should be restructured, so that antenatal clinic will serve as avenues to establish

trust or confidence in health care givers. Majority of the women in this environment have aversion for operative deliveries, especially caesarean section.¹⁹ Therefore, women with previous caesarean sections for a non-recurrent indications should be given opportunities to have vaginal birth after caesarean section (Trial of scar), as much as she certify all the necessary conditions for a successful vaginal delivery.²⁰⁻²⁴ Other procedures such as external cephalic version (ECV), vacuum and forceps deliveries should be encouraged.

In this study, 7(3.28%) had primary postpartum haemorrhage and were transfused, although other had significant blood loss, but were not transfused. Most of them delivered in vehicles. Thus active management of the third stage of labour could not be instituted, which is an effective means of preventing primary postpartum haemorrhage.^{25,26,27}

Although, no maternal mortality was recorded in this study and all the patients had vaginal deliveries, but the 7(3.08%) women that had primary postpartum haemorrhage and were transfused with blood and the 2(0.88%) that had intrapartum eclampsia, would have resulted into maternal mortalities if prompt and appropriate interventions were not instituted.

The perinatal mortality and still birth rates of 35.2/1000 and 26.4/1000 recorded respectively in this study, were lower than the values of 94.1/1000 and 53/1000 respectively reported by Igberase in Niger Delta and the value of 86/1000 and 48/1000 reported by Ekure EN et al in Lagos.^{28,29} This is because, this study considered just a fractional part of the population of the parturients without any significant antenatal maternal or foetal morbidity and no significant adverse intrapartum events, but they just decided to present late in labour in the Hospital.

CONCLUSION:

The reasons for the late arrival in labour identified in this study were previous positive experience of spontaneous vaginal deliveries, and avoiding long period of stay in the hospital that may warrant unnecessary obstetric interventions. The second reason was an indication of lack of trust in the Obstetricians decisions.

The limitations of this study are; difficulty in determining accurately, the duration of labour since these patients have been in labour for several hours before presentation in the hospital and secondly the difficulty in determining accurately the amount of blood loss in those who delivered in vehicles.

Therefore, antenatal health education programme should improve on patients, Midwives and Obstetrician interactions to build up confidence and trust, so that the parturients see the health care givers as companions in labour and not just accoucheurs.

TABLE 1: SOCIO BIOLOGICAL VARIABLES OF THE PATIENTS

VARIABLES	NO	%
Age:(Years)		
15-19	7	3.08
20-24	41	18.06
25-29	61	36.87
30-34	84	37.00
>	34	14.99
Social Class		
I	33	14.54
II	35	15.42
III	151	66.52
IV	6	2.64
V	2	0.88
Parity:		
0	48	21.15
1-2	120	52.86
3-4	57	25.11
>	2	0.88
Gestational Age at Delivery (Weeks)		
< 37	11	4.85
37-39	137	60.35
40-42	78	34.36
>42	1	0.44
Gestational Age at Booking		
Unbooked	31	13.66
< 13	0	-
14-28	62	27.31
29-36	116	51.10
>36	18	7.93
No of ANC visits		
Unbooked	31	13.66
1-3	87	38.33
4-6	94	41.41
>	15	6.60

TABLE 2: DURATION OF LABOUR BEFORE PRESENTATION IN THE HOSPITAL.

Duration Of Labour Before Presentation (Hours)	No	%
<10	25	11.01
10-14	165	72.69
15-18	28	12.33
19-24	9	3.97
>24	—	—
TOTAL	227	100

TABLE 3: ARRIVAL - DELIVERY INTERVALS IN MINUTES.

Arrival –Delivery Interval (Minutes)	NO	%
Birth Before Arrival (BBA)	15	6.61
<15 minutes	9	3.97
15-30 minutes	198	87.22
31-60 minutes	5	2.20
TOTAL	227	100

Table 4: Materno-foetal Outcomes

Outcome Measures	No	%
• Birth Asphyxia	35	15.42
- Mild	17	7.49
- Moderate	11	4.85
- Severe	7	3.08
• Early Neonatal Deaths	2	
• Primary Postpartum Haemorrhage	7	0.88
• Retained Placenta	3	3.08
• SCBU Admissions	6	1.32
• Blood Transfusion	7	2.64
• Perineal Tear (1 ^o and 2 ^o only)	138	3.08
• Cervical Lacerations	3	60.79
• Fresh Still Births	6	1.32
• Intrapartum Eclampsia	2	2.64
		0.88

SCBU:- Special Care Baby Unit.

1^o PPH;- Primary Postpartum Haemorrhage

Fig 1: Scoring System for Social Class.

A. Husband's Occupation.

Scores:

1. Professional, top civil servants, politicians and business man.
2. Middle-level bureaucrats, technicians, skilled artisans and well to-do traders.
3. Unskilled workers and those in general whose income would be at or below the minimum wage.

B. Level of Educational Attainment (Wife).

Scores. 0. Education up to university level.

1. Secondary or tertiary level below the university level e.g college of education, school of nursing etc.
2. No schooling or up to primary level only.

SOCIAL CLASS = Score A + Score B.

Courtesy: Olusanya .O, Okpere E, Ezimokhai M. (WA. J. Med. 1995; 4:4).

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