The Pattern of Obstructed Labour in Uyo, South-Eastern Nigeria

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Abstract

Objective: To determine the frequency of obstructed labour, its pattern of presentation and outcome in Uyo, Nigeria.
Design: Retrospective descriptive study.
Setting: The University of Uyo Teaching Hospital, Uyo, Akwa Ibom State.
Methods: The case notes of patients with obstructed labour managed at the University of Uyo teaching hospital over a five year period were studied.
Results: The incidence of obstructed labour was 3.7%. Most of the patients were nulliparous (48.7%), had no formal education (48.7%) and were between 21-30 years of age (67.9%). Forty-two (53.8%) of the patients booked for ante-natal care in conventional health centers while 46.2% were unbooked. Twenty-two (52.4%) of the booked patients were referred from conventional health centers after their labours had become obstructed. About 47.6% of the booked patients defaulted from ante-natal care and were brought from unorthodox health facilities in very debilitating states. Most of the patients (75.6%) were delivered by Caesarean section. The commonest maternal complication was wound sepsis (25.6%) while the commonest neonatal complication was birth asphyxia (23.1%). The maternal mortality and perinatal mortality rates were 7,692/100,000 and 333.3/1000 births respectively.
Conclusion: Obstructed labour contributes significantly to maternal and perinatal morbidity and mortality in our environment. We advocate investment in midwifery training, replacement of traditional birth attendants with trained professional midwives in all our communities and early referral of patients with complications in labour to adequately equipped and staffed health facilities.

Key Words: Obstructed Labour, Management, Outcome [Trop J Obstet Gynaecol, 2006, 23:146-149]

Introduction

In the developing countries, obstructed labour is a major public health problem as it contributes significantly to maternal and perinatal morbidity and mortality[1-4]. Reports from several centers in Africa and other parts of the world confirm this [5,-8]. Inadequate manpower, poor transportation facilities, poorly supervised and neglected labour, inadequate organization of available health services, poverty and strict adherence to cultural and religious beliefs are still responsible for the persistence of this grave obstetric problem in the developing world [4,6,10]. On the contrary, excellent obstetric and social services have made obstructed labour virtually non-existent in the developed world [4,5,10].

There is paucity of data on obstructed labour and its outcome in Akwa Ibom State where the University of Uyo Teaching Hospital (UUTH) is located and no work has been done on obstructed labour in this center. This study was therefore undertaken to determine the frequency of obstructed labour, its pattern of presentation, mode of management and outcome in UUTH, Uyo. It is hoped that the findings of this study will inform us of the need or otherwise for interventional measures on obstructed labour in Akwa Ibom State.

Materials and Methods

The University of Uyo Teaching Hospital (UUTH) Uyo where this study was carried out is a newly established tertiary health facility, located about 7 kilometers from the center of Uyo town . It has a 60 bed maternity unit and an annual delivery rate of about 800 deliveries. It remains a referral center for Akwa Ibom and some parts of Cross River and Abia states. Uyo is the capital city of Akwa Ibom State in the South-South geo-political zone of Nigeria. It has an estimated population of 234,615 (1991 provisional census figures) and a landmass of about 284,852 square kilometers. It is made up of 5 traditional clans, 12 wards and 119 villages. The inhabitants are mainly civil servants, farmers and traders.

From the delivery and theater registers, the registration numbers of all patients with obstructed labour managed at UUTH between 1st January 1999 and 31st December 2003 were obtained. With the numbers, the case notes of the patients were obtained for in-depth study. Information abstracted included the socio-demographic data, booking status, antenatal clinic attendance, place where antenatal care was obtained, facility where labour was managed, cause of obstruction, mode of management and complications. The data were analysed using tables and percentages and the results obtained formed the basis of the discussion.

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Results

During the period of study, there were 2,776 deliveries and 93 cases of obstructed labour giving an incidence of obstructed labour of 3.7%. Seventy-eight case notes (83.9%) were available for in-depth study and data analysis was based on these.

The socio-demographic characteristics of the patients are shown in table I. Majority of the patients were nulliparous (48.7%) and between 21-30 years of age (67.9%). Thirty-eight patients (48.7%) had no formal education while only 2 patients (2.6%) attained post secondary education. Thirty-six patients (46.2%) were of the Ibibio tribe, 28 (35.9%) were of Annang extraction, 2 (2.6%) each were Igbo and Hausas respectively while 10 (12.8%) were not stated in the case records.

Forty-two patients (53.8%) booked and had regular antenatal care (ANC) in conventional health centers (CHCs). Twenty-two of these patients (52.4%), were only referred from these CHCs when their labours had become obstructed. Twenty of the patients (47.6%) who booked and had regular ANC in CHCs however defaulted and attempted to deliver in un-orthodox health facilities, viz; traditional birth attendants (17.9%), spiritual churches (5.1%), and their homes (2.6%). They were brought to the teaching hospital when their labours had become obstructed and complications had occurred. Thirty-six patients were unbooked (46.2%) and were brought to the teaching hospital from various unorthodox health facilities viz; traditional birth attendants (33.3%), spiritual churches (10.3%) and their homes (2.6%), after complications had occurred.

The various aetiological factors associated with obstructed labour in this series and their respective modes of management are shown in table 2. The most common aetiological factor was cephalo-pelvic disproportion (73.1%) while the most common procedure carried out was emergency lower segment Caesarean Section (75.6%).

The maternal and perinatal outcome are shown in table 3. The most common maternal complication was wound sepsis (25.6%) while the least common was anaemic heart failure (1.3%). There were 26 perinatal deaths resulting in a perinatal mortality rate (PNMR) of 333.3/1000 births, while the overall PNMR for the hospital was 56/1000 births. There were 6 maternal deaths resulting in a maternal mortality rate (MMR) of 7,692/100,000. The overall MMR in the hospital was 180/100,000.

Discussion

The incidence of obstructed labour in our center was 3.7%. It was more common among nulliparous

Table 1:
Socio-Demographic Characteristics of the Patients

Variable	Number (%)
Parity	
0	38 (48.7)
1 - 4	30 (38.5)
= 5	10 (12.8)
Age	
16 20	14 (17.9)
21 25	23 (29.5)
26 30	30 (38.5)
31 35	8 (10.3)
36 40	3 (3.8)
Educational Status	
No formal education	38 (48.7)
Primary level education	22 (28.2)
Secondary level education	12 (15.4)
Tertiary level education	6 (7.7)

Table 2: Aetiological factors associated with obstructed labour and the modes of management

Variable n=78	No. (%)
Causes of obstruction	
Cephalopelvic-disproportion	57 (73.1)
Persistent occipito-posterior position	8 (10.3)
Breech presentation	7 (9.0)
Transverse lie of first twin	2 (2.6)
Deep transverse arrest	2 (2.6)
Not stated	2 (2.6)
Modes of management	
Lower segment Caesarean Section	59 (75.6)
Repair of uterine rupture	9 (11.6)
Craniotomy	6 (7.7)
Total abdominal hysterectomy	2 (2.6)
Not stated	2 (2.6)

Table 3: Outcome of Obstructed Labour.

Variable n=78	No (%)
Maternal	
Wound sepsis	20 (25.6)
Ruptured uterus	14 (17.9)
Puerperal sepsis	10 (12.8)
Post- partum anaemia	8 (10.3)
Maternal death	6 (7.7)
Vesico-vaginal fistula	4 (5.1)
Primary post-partum hemorrhage	3 (3.8)
Recto-vaginal fistula	1 (1.3)
Anaemic heart failure	1 (1.3)
Perinatal	
Perinatal death	26 (33.3)
Birth asphyxia	18 (23.1)

women and in those who booked for ANC in CHCs. Cephalopelvic disproportion (CPD) was the most common aetiological factor while LSCS was the commonest mode of treatment. Maternal complications were mainly wound sepsis, ruptured uterus and puerperal sepsis. The most frequently associated neonatal complication was birth asphyxia. The MMR was 7,692/100,000 while the PMR was 333.3/1000 births.

This study is retrospective in design and was carried out in a tertiary health facility. Thus, its findings may not entirely represent what obtains in other health facilities in the state or in the rural communities. However, it is the first study carried out on obstructed labour in the state and as such provides the necessary baseline data required to create awareness and plan intervention measures.

The incidence of obstructed labour in our center is higher than those of Benin [12], Ibadan [11], Jos [4], Maiduguri [9], and Ilorin [13], but lower than that of Ilesha [3]. However, these studies were also retrospective observational studies, conducted in tertiary health centers and therefore had the same limitations as ours.

As reported in most other studies, obstructed labour was most common among nulliparous patients [3,4,13]. Most studies associate nulliparity with cephalo-pelvic disproportion [2-4] which was also the commonest cause of obstructed labour in our center. This is probably because poverty, recurrent infections, malnutrition and early marriages still endemic in our environment may result in our adult females failing to attain their full developmental potentials at first pregnancy, leading to a high incidence of generally contracted pelvis among our women folk [14].

In contrast to other studies in this country where majority of the patients were unbooked and never had antenatal care [3,4,6,9], in our study, about 53.8% of the patients booked and had regular antenatal care in CHCs. However, most of the booked patients were only referred to the teaching hospital from the CHCs when their labours had become obstructed and vaginal delivery was not possible. This was probably because partographs, which are simple invaluable tools designed to aid management and referral decisions in labour and ultimately prevent prolonged labour [15] were not used for labour monitoring in these CHCs. There was also a high rate of antenatal clinic default among the patients as 47.6% of the booked patients defaulted and attempted to deliver in unorthodox health facilities. Etuk et al in their study reported high rates of maternal mortality and morbidity in booked women who defaulted and delivered in unorthodox health facilities in Calabar [16].

A large proportion of the patients in this study were unbooked. Unbooked emergencies are known to constitute the main high-risk group for maternal mortality in this country as they make up no fewer than 70% of all maternal deaths [17]. These women fail to receive ANC and instead arrive at the hospital for the first time when their life's are already endangered by difficult labour [18]. Worldwide, ANC is generally acknowledged as a measure for the reduction of maternal and perinatal morbidity and mortality [19] and its positive influence is usually noticed in patients who not only receive ANC but also deliver in orthodox health facilities where emergency obstetric care (EOC) is available [20].

This study shows that traditional birth attendants (TBAs) are heavily utilized by our pregnant women as 72.2% of the unbooked women and 70.0% of the antenatal clinic defaulters were brought from TBAs as a last resort after complications had occurred. Unfortunately, TBAs are reported to conduct over 80.0% of rural and 45.0% of urban births in this country [21]. This has been attributed to their proximity to the people, lower charges for services, the confidence the people have in them, and the cultural relevance of their practice [21].Training of TBAs was one of the suggestions earlier made to reduce maternal mortality in Nigeria and efforts were made to train them in various health institutions [22]. However, it has now been recognised and widely accepted that training of TBAs does not result in a reduction in maternal deaths [23,24]. TBAs, simply do not have the resources or skills to do more than assist at uncomplicated births in very basic ways and certainly are not trained to save women's lives in cases of obstetric emergencies [25]. Consequently, the practice of TBAs is still associated with very high maternal and perinatal morbidity and mortality. John et

al in an earlier study in Akwa Ibom and Cross River States discovered that knowledge of risk factors in pregnancy was not significantly different between previously trained and untrained TBAs [21]. They also discovered that generally, TBAs were not willing to co-operate with or release clients to CHCs and some actually dissuaded women from orthodox maternity care by telling them that they have "locked" their pregnancy against evil forces and only have to "unlock" it for the baby to be born [21].

Lower segment Caesarean section was the commonest mode of treatment in this study. This is similar to the findings of other workers in this country [3,4,6,9]. Caesarean section is usually the treatment of choice when the fetus is alive. Craniotomy was performed when the fetus was dead and in a cephalic presentation with associated genital sepsis. This is because the risk of overwhelming sepsis that may follow Caesarean section under this circumstance is very high. Exploratory laparotomy and repair of the uterus or total abdominal hysterectomy (TAH) were performed when the uterus had ruptured.

Obstructed labour, an entirely preventable condition, still contributes significantly to maternal and perinatal morbidity and mortality in our environment. Majority of the cases are brought from TBAs. Thus, there is an urgent need for our government to ensure the replacement of TBAs with trained professional midwives who would offer appropriate basic EOC services at the community level and assist in their integration into the community. Hence, substantial investment in midwifery training should become a priority of our government. District hospitals at first referral level need to be appropriately equipped and adequately staffed in order to be able to offer comprehensive EOC services to our women. All doctors and midwives in CHCs that offer maternity care should be trained in the modern management of labour with emphasis on the use of the partograph for labour monitoring and appropriate refresher courses organized periodically to ensure constant use of this simple invaluable tool. There should be intensive health education and grass roots enlightenment on the need and importance of our women availing themselves for hospital antenatal care and delivery. Above all, the presence of an appropriately trained and skilled attendant at birth may be the most effective intervention in reducing this grave obstetric calamity in our environment and similar communities within and outside Nigeria.

References

1. Lawson JB. Obstructed labour In: *Obstetrics/Gynaecology in the Tropics and Developing Countries.* 1st ed. Edward Arnold, 1967; 172-202.
2. Philpott RH. Obstructed labour. *Clin Obstet Gynaecol.* 1982; 9 : 625-640
3. Fasubaa OB, Ogunniyi SO, Omale AE, Owolabi AT. Analysis of Obstructed labour in Wesley Guild hospital, Ilesha, Nigeria. *Nig J Clin Practice.* 1999;2: 39-41.
4. Wright EA. Obstructed labour *Nig Med Pract* 1988; 18: 397-400.
5. Fasubaa OB, Oguniyi SO, Ezechi OC. Maternal mortality in Obafemi Awolowo University teaching Hospitals complex, Ile-Ife A comparison of maternal deaths in young and the older women. *Nig J Med* 1998; 8: 147-151.
6. Ijaya MA, Aboyeji AP. Obstructed labour: a major public health problem in Africa. *Africa Health*. 2000; 23: 16-18.
7. Chukwudebelu WO, Ozumba BC. Maternal mortality at the University of Nigeria teaching hospital, Enugu: a 10-year survey. *Trop J Obstet Gynaecol.* 1988 (special ed.) 1: 23-25.
8. Neilson JP, Lavender T, Quenby S, Wray S. Obstructed labour: reducing maternal death and disability during pregnancy. *Br Med Bull* 2003; 67: 191-204.
9. Kulkarni R, Kyari OA, Basumalik MK. An analytical study of obstructed labour. *Nig Med Pract* 1983; 5: 11-18.
10. Udoma EJ, Ekanem AD, John ME, Eshiet AT The role of institutional factors in maternal mortality from obstructed labour. *Global J Med Sci.* 2003; 2:13-17.
11. Konje JC, Obiesan KA, Ladipo OA. Obstructed labour in Ibadan. *Int J Gynaecol Obstet* 1992; 19: 17-21.
12. Oronsanye AU, Asuen MI. Obstructed labour-a 4 year survey at the University of Benin Teaching hospital, Benin city, Nigeria. *Trop Doct* 1980. 10: 113.
13. Jimoh AA, Balogun OR, Danladi A. Obstructed labour at the University of Ilorin teaching hospital, Ilorin. *Nig Med Pract.* 2005, 47 (4): 54-57.
14. Abasiattai AM, Bassey EA, Etuk SJ, Udoma EJ, Ekanem AD. Caesarean section in the management of singleton breech delivery in Calabar, Nigeria. *Nig J Clin Pract* 2006; 9 (1): 22-25.
15. World Health Organisation. *The Partograph: a managerial tool for the prevention of prolonged labour.* Section 1: The principle and strategy, Document EHO/MCH/88.3 Geneva: World Health Organisation 1988.
16. Etuk SJ, Itam IH, Asuquo EEJ. Morbidity and mortality in booked women who deliver outside orthodox health facilities in Calabar, Nigeria. *Acta Tropica.* 2000; 75: 309-313.
17. Harrison KA. William Meredith Fletcher Shaw memorial lecture: poverty, deprivation and maternal health. In Studd J ed. *Year Book of the RCOG.* London: Royal College of Obstetricians/Gynaecologists', 1995; 33-34
18. Harrison K. Maternal mortality in Nigeria; The real issues. *Afr J Reprod Health.* 1997;. 1; 7-13
19. Harrison K. Maternal mortality-A sharper focus on a major issue of our time. *Trop J Obstet Gynaecol* 1988 (special ed) 1: 9-13
20. Lennox CE. Assessment of obstetric high risk factors in a developing country. *Trop Doct* 1984; 125-128
21. John ME, Udoma EJ, Udoh MO, Ndebbio TJ, Idiong MS. Knowledge and practice of TBAs concerning risk factors in pregnancy, labour and puerperium. *Afr J Nurs Midwifery*. 2002. 4; 41-45.
22. Salako AA. The Traditional birth attendant and the high Nigeria's maternal mortality. *Nig J Clin. Pract* 2002. 5; 69-70
23. De Brouwere V, Tonglet R, Van Lerberghe W. Strategies for reducing maternal mortality in developing countries: What can we learn from the history of the industrialized west? Trop *Med Int Health* 1983; 3: 771-82.
24. Kamal IT. The traditional birth attendant: a reality and a challenge. *Int J Gynaecol Obstet* 2000. 63 (suppl 1): S48-S52.
25. Berer M. Traditional Birth Attendants in developing countries cannot be expected to carry out HIV/AIDS prevention and treatment activities. *Reproductive Health Matters.* 2003; 22: 36-39