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Factors Contributing to Uterine Rupture in Women Having Vaginal Births After Caesarean Section

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Abstract

Context: Ruptured gravid uterus is a common occurrence in our environment with higher risk in scarred uterus. Some women will attempt vaginal delivery at home after a caesarean section had been performed for cephalopelvic disproportion.
Objective: To evaluate the various reasons put forward by our women for attempting vaginal delivery at home despite previous caesarean section.
Subjects and Methods: Patients with ruptured gravid uterus during labour with history of previous caesarean section were studied using structured interview formats. Their demographic characteristics, social class, booking status, place of attempted vaginal delivery and various reasons for seeking unorthodox care. Close relative of patients were interviewed in unconscious or moribund patients.
Results: Some 24(96.0%) of the patient had no antenatal care in the index pregnancy and had laboured in spiritual churches or in traditional birth attendants homes. Ninteen (76.0%) were of low social class. Various reasons for attempting vaginal delivery at TBA's or spiritual churches included lack of funds 9(37.5%) husbands or close relative not available to take decision for hospital delivery 6(25.0%), not appreciating the need for hospital delivery 3(12.5%) and no reason 1(4.2%). There were 12 maternal deaths giving a case fatality rate of 48%.
Conclusion: The study shows socio economic factors, dependency on family decisions and belief in supernatural powers as major reasons our women chose unorthodox delivery despite prior caesarean section and recommend ways of preventing it.

Key Words: Vaginal Birth after Caesarean Section, Uterine Rupture.

Introduction

Ruptured gravid uterus is a common occurrence in our environment. This clinical catastrophe occurs both in scarred and unscarred uterus and contributes significantly to the high maternal and perinatal morbidity and mortality rates in Nigeria [1,2]. In Nigeria, it is a common experience that our women do not accept caesarean sections very readily. In some communities, a pregnant woman is expected to deliver vaginally in order to prove conclusively that she is a woman [3]. It is therefore not surprising that some of our women will go to any length to try to deliver vaginally. Some patients would ignore all warnings to come for an elective caesarean section during the next delivery even after a Caesarean Section had been performed for cephalo-pelvic disproportion. Although there is an absence of definitive statistics in our environment, there is no doubt that the risk of ruptured uterus is higher in scarred uterus than unscarred uterus. One therefore wonders why our women continue to attempt vaginal delivery in unorthodox places despite all these risk. Could it be that the information given during their previous Caesarean Section was inadequate to convince them about the need to have hospital confinement, or are there some other socio cultural and economic factors that are responsible for these? Most studies in our environment tend to focus on the incidence and outcome of uterine rupture [1, 2]. Studies focusing specifically on the reasons why our women continue to attempt vaginal delivery outside orthodox health care despite previous caesarean section are rare.

This study was therefore carried out to see the various reasons put forward by our women as to why they attempted vaginal delivery at traditional birth attendant's homes or spiritual churches despite the associated risk. It is believed that the outcome of this study will be used to recommend appropriate strategies to reduce the maternal morbidity and mortality arising from it.

Patients and Methods

The study was conducted in Calabar the capital of Cross River State, in south- south zone of Nigeria between 1st January 1995 and 31st December 2003. It has an estimated population of 320,862 of which 166,203 are males and 154,659 are females. There are two Hospitals: The University of Calabar Teaching Hospital (UCTH), and the state Government General Hospital, ten health centres and seven private clinics. Two centres were selected for the study: The {UCTH), and a private clinic- MEVOM specialist clinic, Calabar. The UCTH also serves as a major referral obstetric facility to the south south Zone of Nigeria. Patients with ruptured

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gravid uterus during labour with history of prior caesarean section were studied using structured interviews formats. Respondent were asked questions on their ages, marital status, educational attainment and occupation of husbands. Also asked were the booking status of patients, place of attempted vaginal delivery and the various reasons. Close relative of patients were interviewed in unconscious or moribund patients. The interviews were translated into local languages for better understanding by the subjects.

Each subject was allotted to one of the five social classes according to a scoring system based on husband's occupation and her educational status [4]. Educational status was categorised into four namely high, medium low and no education [5]. Each woman's social class was obtained by adding her score from her educational attainment to that of her husband's occupation. Social classes I and II represented the elites, class III the middle class of nurses, clerks and technicians, while classes IV and V represented the lowest rung of our socio economic ladder. Patients relations did not accede to the request for autopsy, thus the cause{s}of deaths were based on clinical diagnosis in all the cases. Data were analysed in groups and percentages.

Table 2
Reasons for Attempted Vaginal Delivery in Unorthodox Places.

Reasons	Number	(%)
Lack of fund	9	37.5
Husband or relative not available to take decision	6	25.0
Reliability in God's miracle	5	20.8
Did not appreciate the need for hospital delivery	3	12.5
No reason	1	4.2
Total	24	100

Results

During the period under study there were 11, 844 consecutive hospital deliveries in the two health facilities (10,192 in UCTH and 1652 in MEVOM specialist clinic). One thousand five hundred and twenty five (12.9%) had had previous caesarean section, and twenty five (1.6%) out of these had ruptured gravid uterus during labour. Nineteen (76.0%) with previous history of primary caesarean section while 6(24.0%) had had two or more caesarean sections in their previous deliveries. None of them had antenatal care in their previous delivery and they all had emergency caesarean section during that delivery. Twenty four (96.0%) of these patients had no antenatal care in the index pregnancy and laboured in the spiritual churches or in traditional birth attendant's homes, and were only brought to UCTH in advanced obstructed labour with uterine rupture. One (4.0%) patient had routine ante-natal care but had ruptured uterus in labour following oxytocin induction.

Age distribution revealed that majority 16(64.0%) were ages between 21 and 30 years, eight (32.0%) were ages between 31 and 40 years, while 1(4.0%) was 42years old. There was none below 20years. Social class of patients revealed that majority (76.0%) were in social classes IV and V (Table I). Reasons given for attempting vaginal delivery in the spiritual churches or traditional birth attendant's homes in 24 cases of ruptured uterus are seen in Table II. Lack of funds was the reason in 9(37.5%), husbands or close relative not available to take decision for hospital delivery in 6(25.0%), reliability in God's miracle in 5(20.8%), not appreciating the need for hospital delivery in 3(12.5%) and no reason given in 1(4.2%). There were 12 maternal deaths giving a case fatality rate of 48%. The probable causes of deaths being haemorrhage 5(41.7 %), septicaemia 4(33.3 %), post operative shock in 2(16.7%) and renal failure in 1(8.3%). Only four babies survived with a perinatal mortality rate of 840/ 1000. This was due to the fact that in majority of the cases, there was an associated intra uterine fetal death before presentation.

Discussion

The study has highlighted the socio demographic characteristics of women with prior caesarean section who had ruptured gravid uterus in labour. It has also shown the various reasons given by these women for the attempted vaginal delivery in unorthodox places despite previous caesarean delivery. Majority of these women were aged between 21 and 30 years representing the peak period of their reproductive life. Again they were of low social class and education and financial reasons was the cause in majority of cases. There is no doubt concerning this as Nigeria is one of the poorest nations in terms of gross national product per capita income [6]. The sudden increase in orthodox health care delivery fees has made more women to seek refuge in God through spiritual churches for delivery thereby using cheaper health services [7, 8]. This is not surprising as earlier studies in this community had shown that many spiritual churches attended to pregnant women in labour at no cost [7]. People wittingly or unwittingly count economic cost in every facet of life, and the cost of antenatal care and delivery in Nigeria as earlier reported [5], ranges between 227 and 303 United States dollars (N30, 000.00 N40, 000.00). This is far out of the reach of the poor.

Another reason given by these women included that their husbands or close relatives were not available to take the decision concerning hospital delivery. Unlike the practice in developed countries, among the rural Nigerians, the decision whether or not a sick person should be hospitalized has never been totally an

individual decision but is one taken by the family [9]. Individuals are not quite free to develop their unique capacities and powers. The family always exert certain discipline and obligations not only in matters concerning health but the choice of marriage partners; as such the young wife must depend on the in-laws decisions even in issues concerning health. In reality, since in rural areas individuals cannot detach themselves from their families, and since in practical terms the family provides useful economic, social, emotional and psychological functions [9], it is difficult to see how the family will lose its grip on the individual. Even in the United States of America where both rural and urban families are said to be becoming less patriarchal and more equalitarian, it has also been acknowledge that the rural families are probably still more patriarchal than urban families [10]. Although this study was done in a tertiary institution in an urban area, majority of these patients were living in rural areas.

Table 1:
Social Class of Patients with Ruptured Gravid Uterus

Social Class	Number	Percentage(%)
I	0	0
II	2	8.0
III	4	16.0
IV	8	32.0
V	11	44.0
Total	25	100.0

Reliability in God's miracle and inability to appreciate the need for hospital deliveries were other reasons given by these patients. In Nigeria difficult labour are usually attributed to supernatural causes and therefore requires divine intervention [11]. Again beliefs and fear instilled into members by the spiritual churches through prophecies and visions may be responsible for these phenomenon. Earlier studies had shown that most of the complicated obstetric cases seen in our centre were from spiritual churches [12]. Sermons are more pragmatic and touch on important issues of direct relevance to their members' need [13]. Testimonies of their people who have been healed are usually presented to their members [7]. Such testimonies tend to dissuade patients from seeking orthodox health care thereby reporting late when complications had set in. Inability to appreciate the need for hospital delivery may be that the emergency state of the previous caesarean deliveries probably did not give enough time for proper counselling of patient before surgery. There were twelve maternal deaths and were mostly due to non availability of adequate blood for transfusion in majority of cases. The relatives of patient were reluctant to donate blood probably due to ignorance and superstitious beliefs that blood donations reduce the life expectancy of an individual [14].

The study has shown that low socio- economic factors and dependency on family decision, as well as belief in supernatural powers have been the major reasons why our women chose unorthodox delivery despite prior caesarean section(s), with the resultant high maternal and perinatal mortality. The prevention of these factors relies on the eradication of illiteracy among our women as well as provision of free and compulsory education to senior secondary three levels. Health education should form an integral part of the curriculum of schools. Apart from all these, there is need to create more job opportunities for our populace as this will improve the social status of many. The current method of counselling concerning the caesarean operation in patients may not be adequate as the information is limited to the patient or the husband neglecting the society that depends on family for decisions concerning health. Counselling should therefore involve the extended family or possibly the family head in some special cases that may likely depend on family decisions especially those in rural communities. This should include health education and the need for hospital delivery in subsequent pregnancies including the attendants' risk. It is believed that this will go along way to reduce the maternal mortality associated with this in our environment.

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