

Socio Demographic Profile And Presentations of Patients With Ruptured Gravid Uterus in Calabar Nigeria

Ekane E I, Etuk S J, Ekott M I, Ekabua J E, Iklaki C

Department of Obstetrics and Gynaecology College of Medical Sciences University of Calabar, Calabar

ABSTRACT

Background: To study the Socio-demographic profiles and mode of clinical presentations of with uterine rupture in pregnancy in Calabar, Nigeria.

Method: Medical records of 67 patients managed for ruptured gravid uterus over 10 years in Maternity section of the University of Calabar Teaching Hospital Calabar, Nigeria were reviewed.

Results: An incidence of 1 in 213 of all deliveries during the period was established. Majority (49.2%) were aged between 31 to 40 years and 43.3% had no formal education. Unemployed patients were 29.9%, 42.3% did not book for antenatal care while 32.8% were attended to by traditional birth attendants (TBA) and in the churches. The Commonest clinical presentations were fetal heart rate abnormalities (52.2%) and maternal collapse (46.3%). Majority (50.7%) resulted from neglected obstructed labour.

Conclusion: Ruptured uterus is a problem of ignorance among women of low socioeconomic group with most of them having unskilled and substandard care during pregnancy and delivery. Improvement in Socio-economic conditions and modification of some harmful cultural practices against women generally will reduce the problem of rupture uterus in our society

Key words: Social class, Clinical Presentations, Ruptured uterus

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INTRODUCTION

Rupture of a pregnant uterus is a serious obstetric emergency, which has been shown to contribute greatly to high maternal and perinatal mortality and morbidity worldwide.¹⁻⁴ In developed countries of the world it is a rare clinical entity, which is occasionally encountered as uterine dehiscence following vaginal birth after caesarean sections (VBACS)⁴ or complication from traumatic injuries during pregnancy.⁵ In developing countries the situation is different with the incidence either remaining constant or rising in some places over the years⁶⁻⁹ despite appreciable increase in technological developments.

The high incidence of ruptured uterus in the developing countries has been attributed partly to poor obstetric

care.^{7,10} Besides, there is high prevalence of predisposing factors to uterine rupture such as prolonged obstructed labour,^{2, 11, 12} and grandmultiparity.^{7,13} Destructive vaginal delivery^{9,14,15} and other difficult intra-vaginal manipulations^{10,16} to avoid caesarean sections are still being practiced. Untrained personnel in churches and traditional birth attendants are still supervising most deliveries even in women with previously scared uteri.^{7,17-19} All these factors which adversely affect the incidence and outcome of management of ruptured uterus may be influenced by some harmful cultural practices and socio-economic status of the women.²⁰⁻²² The latter also constitute delay on the part of the patients to recognise the problems and take appropriate decision on time to receive skilled care during pregnancy and childbirth.

It is believed that influencing these remote conditions will help to reduce the predisposing factors and improve utilization of available obstetric facilities thereby resulting in better maternal and perinatal outcome.

Hence this study was designed to assess the socio-demographic characteristics and mode of clinical presentation of patients with ruptured gravid uterus in the University of Calabar Teaching Hospital Nigeria. It is hoped that the findings of this study will provide information that will help to identify the women to be targeted for health education if the incidence of ruptured uterus is to reduce in our community.

PATIENTS AND METHODS

This study was carried in the maternity annex of University of Calabar Teaching Hospital (UCTH) over ten years (1st January 1993 to 31st December 2004).

Calabar where UCTH is located is the capital of Cross River State in the South-South (Niger Delta) region of Nigeria in Africa. It has an estimated population of 1.9 million with female literacy level of 54.1 and fertility rate of 6.2. The inhabitants are the indigenous Efik, Ibibio, Annang, Igbo and other tribes in Nigeria. Their main occupations include public service, trading, farming and fishing. The University of Calabar Teaching Hospital is the only tertiary health institution in the state.

Though a tertiary institution, it receives patients directly as they present themselves and referrals from private and public hospitals in Cross River, Akwa Ibom, Abia and Benue states as well as Republic of Cameroun.

All patients managed for ruptured uterus over the study period were reviewed. The case files were retrieved from the hospital records department for indebt study. Information was also obtained from records in labour ward, operation theatre and the morbid anatomy department. Patients who had ruptured uterus before 28 weeks of gestation, those whose ruptures were not confirmed by surgery or post mortem examination and those with inadequate information for analysis were excluded from the study. Information abstracted included socio-demographic characteristics, parity, booking status, institutions of referral and clinical presentations. The data was analyzed using Epi Info 6 package and presented as proportions, percentages and tables.

For the purpose of this study the following definitions were accepted:

1. Maternity Homes referred to private Maternity Centres manage by retired midwives with no resident Medical Officer.
2. Unbooked status referred to patients who did not register and had no antenatal care in any approved health institutions during the pregnancy.
3. Booked but interfered were those patients who registered and had regular antenatal care in the hospital but attempted to deliver outside approved orthodox medical institution.
4. Defaulter refers to patients who attend the antenatal clinic once and where only seen again in advanced labour.
5. Social class assessment was based on the Registrar general 5 point occupational classification modified to suit our environment.¹⁷

RESULTS

A total of 14227 women were delivered during the study period and 67 of them were managed for ruptured uterus giving an incidence of 1 in 213 or 5 per 1000 deliveries.

In table one the socio-demographic features of the patients with ruptured uterus shown: Majority (74.6%) were aged 31 – 40 years old and 8 (11.9%) were teenagers. Twenty nine (43.3%) had no formal education while 41 (61.2%) were in Social Classes IV and V. They were mostly (55.2%) married women.

Parity and booking status of the patients is represented in table II.

Ruptured uterus occurred in 3 (4.5%) nulliparous patients. Most of them (67.1%) were multiparous (para 1-4) and 19 (12.7%) were grandmultiparous women. Three (4.5%) patients had normal regular antenatal care in the hospital. The remaining patients were either unbooked 31 (42.3%), defaulters 11 (16.4%) from antenatal care while 22 (32.8%) were interfered with by unskilled attempt to deliver outside orthodox medical institutions.

Table I
Sociodemographic Characteristics of patients with uterine rupture.

AGE (year)	NO.	%
19 and less	8	11.9
20 – 30	22	32.8
31 – 40	33	49.3
41 and above	4	6.0
Total	67	100
Educational Qualification of patients		
None	29	43.3
Primary	21	31.3
Secondary	13	19.4
Tertiary	4	6.0
Total	67	100
Social class of patients		
Class		
I	3	4.5
II	9	13.4
III	14	20.9
IV	19	28.4
V	22	32.8
Total	67	100.0
Marital Status of Patients		
Unmarried	19	28.4
Married	37	55.2
Others	11	16.4
Total	67	100

Table II
Parity and Booking characteristic of Patients with ruptured uterus

Parity	NO	%
0	3	4.5
1 – 4	45	67.1
5 & above	19	28.4
Total	67	100
Booking status		
Booked	3	4.5
Unbooked	31	42.3
Booked but defaulted	11	16.4
Booked & interfered	22	32.8
Total	67	100

Table III. Institution or Places of Referrals to UCTH and/Time Interval between onset of Labour and Presentation in UCTH

Institution	No	%
Traditional Birth Attendants home s	19	28.4
Churches	15	22.4
Maternity Homes	13	19.4
Primary Health Centres	9	13.4
General/Private Hospitals	6	9.0
Others	5	7.4
Total	67	100

Time Interval between onset of Labour and Presentation in the hospital

Time Interval (Hours)	No	%
6 and Less	4	5.9
7 – 12	6	9.0
13 – 18	28	41.8
19 – 24	20	29.9
more than 24	9	13.4
Total	67	100

Table IV Predisposing factors and Clinical finding at Presentation

Predisposing Factors	No	%
Previous uterine scar	14	21.0
Instrumental Vaginal Deliveries	7	10.4
Other Intra Vaginal Manipulations	3	4.5
Injudicious use of oxytocis	8	11.9
Prolonged obstructed Labour	35	52.2
Total	67	100
Clinical Findings at Presentation		
Fetal Heart rate Abnormalities	34	50.7
Maternal Collapse	19	28.3
Vaginal Bleeding	6	9.0
Cessation of Uterine Contractions	5	7.5
Easily Palpable fetal Parts	3	4.5
Total	67	100

The institutions that the patients were referred from to UCTH and the time interval between the onset of labour and admission to the hospital is shown in Table III: Nineteen (28.4%) patients were referred from TBA homes, 15 (22.4%) from churches and 13 (19.4%) from Maternity

Homes. Time Interval between onset of labour and presentation in the hospital shows that only 4 (5.9%) patients were admitted within 6 hours of onset of labour, 28 (41.8%) were seen between 13 – 18 hours and 9 (13.4%) after 24 hours.

Table IV shows predisposing factors and clinical findings at presentation. Thirty five (52.2%) had ruptured uteri as a result of obstructed labour, 14 (21.0%) had previous uterine scar as predisposing factor to the rupture while 7 (10.4%) had instrumental vaginal deliveries. There was injudicious use of oxytocic therapy in 8 (11.9%) patients. The clinical findings at the time of diagnosis were fetal heart rate abnormalities, maternal collapse and vaginal bleeding in 34 (50.7%), 19 (28.3%) and 6 (9.0%) respectively. Only 3 (4.5%) had easily palpable fetal parts on abdominal examination.

DISCUSSION

Many studies from developing countries^{3,6,9,10} show high incidence of ruptured uterus as in this study. The incidence of 1 in 213 deliveries recorded in this study may not reflect the true magnitude of the problem in Calabar as most deliveries take place outside orthodox medical institutions^{7,17,18} and only patients in advanced stages with complications are seen in this referral institution. It, however, demonstrates the fact that the problem of ruptured uterus has not improved over the years despite some appreciable technological development.

Unlike most reports,^{4,9,10} 11.9% patients in this study were teenagers. Most of these young mothers had their pregnancies at this advanced stage for the first time having had repeated complicated unsafe abortions. These abortions might have been complicated by sub-clinical uterine injuries which probably predispose to rupture in the index pregnancy. Unskilled manipulation by untrained attendants to relieve obstruction in young primigravidae may also contribute.^{14,23-25}

Illiteracy and low socioeconomic status of women has constantly been shown to negatively influence the incidence of most obstetric complications including ruptured uterus,^{2,13,20,26} as shown by this study where 43.3% had no formal education and 61.2% were from social IV and V. These factors make recognition of problems difficult thus contributing to delay in obtaining skilled care.

Poverty and social class may play little part in 6% of the patients who were graduates of higher institution and 4.5% of social class I. These latter group may be influenced by religious and cultural beliefs in our society where major decisions concerning health matters particularly obstetrics care await spousal and family confirmation irrespective of the woman's social status. This decision may include spiritual advice by the priests/pastors with little consideration to orthodox medical attention thus adding to delay in obtaining skilled care.^{7, 17-19}

As reported by others from Nigeria and other developing countries^{1, 2, 9, 26-28} most patients in this study did not have antenatal care. Some of those who registered for care defaulted or attempted to deliver outside orthodox medical centres. Reasons such as high hospital bills, prophetic warning by the church, pressure from relatives, previous experience with hospital staff and mind set on the preferred place of delivery have been suggested by other workers^{2, 17, 26, 28} to be responsible for greater than 40% delivery not being attended to by trained personnel in developing countries.

The fear of repeat surgical intervention and induction of labour may force some of these patients particularly those with previous caesarean section to seek delivery in places where fears of these interventions are allayed. Some of our women would want to persist on dangerous vaginal delivery as a proof of womanhood.

Most patients in this study were referred from traditional birth attendants, churches and maternity homes. Similar pattern has already been reported by others.^{2, 9, 10, 24, 27} Various reasons have been advanced to explain why women in the less developed countries patronize these groups. These among others include low cost, attending to other needs of the patients and other socio-cultural factors.^{19, 17, 26} Whatever the reasons however, this underscore the need to critically evaluate the role of TBAs and spiritual churches in obstetric care in poor resource areas with the view to improving their activities with the current realities of the 21st century practice.

Many studies on interval between onset of various obstetric complications and effective interventions reveal improved outcome with shorter interval. Most patients in this study were seen after 13 hours in labour with 13.4% presenting after 24 hours. It is interesting to know that some of the patients were managed in the General and private hospitals by medical officers with various unskilled manoeuvres and intrauterine manipulations only to refer

the patients when complications occur. Poor referral systems have been cited by others to constitute delays in patients getting appropriate skilled intervention when obstetric complications occur.^{7, 10, 18} Early referral may play important role particularly in primary health centres when managing high risk patients. Timely referral to higher level of care with facilities for appropriate intervention would give better outcome.

Most uterine ruptures in Nigeria and other developing countries followed prolonged obstructed labour, difficult instrumental vaginal deliveries and injudicious use of oxytocics for induction of labour^{7, 9, 15, 24, 25, 27} as in this study. Three booked patients in UCTH with previous caesarean section had ruptured uterus following poorly supervised induced labour with prostaglandin analogue. Cautious use of these agents in the absence of continuous fetal heart monitoring and intrauterine pressure catheter in the presence of previous uterine scar has been suggested by others.⁴ It is difficult to appreciate hypertonic uterine contractions or early abnormal changes in fetal heart activities with intermittent monitoring. This is particularly important in Calabar as most patients in this study presented with fetal heart rate abnormalities, maternal collapse and only a few had vaginal bleeding.

CONCLUSION AND RECOMMENDATION

It is sad that while fetomaternal medicine in the 21st Century in the developed nations centers on improved fetal monitoring and therapy including intrauterine fetal surgery we in the developing world are still concerned with managing uterine rupture. This is well demonstrated by this study where uterine rupture is still a problem of poverty and illiteracy which contribute to delay in recognition of the problem and decision making to seek skilled care. The meddling practices of TBAs and Spiritual Churches and poor referral system accentuate these delays resulting in patients receiving appropriate management at advanced stages of complications. It is recommended that the socioeconomic conditions of the women be improved by encouraging universal compulsory basic education to junior secondary school level. The roles of TBAs and churches in the emerging care should be spelt out by appropriate legislation until such a time when enough manpower and facilities are available to replace them.

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