

Subsequent Childbirth among Obstetric Fistula Survivors with Unrepaired Fistulas in South Eastern Nigeria

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Abstract

Objective: Obstetric fistula (OF) is one of the worst childbirth morbidities with medico-social consequences like amenorrhoea, infertility and marital disharmony. This study seeks to document the profile of Obstetric fistula survivors who had subsequent childbirth (Subsequent Childbirth group-(SCBG) with unrepaired OF and to compare their profile with the profile of the rest of the study population who did not achieve a childbirth Non Childbirth Group- (NCBG).

Setting: The setting was the Southeast Fistula Centre, Abakaliki, Ebonyi State, Nigeria.

Population: Two hundred and eighty-two clients with unrepaired OF participated

Method: This was a cross-sectional study.

Results: The prevalence of childbirth among the study population was 30%. The median age for the childbirth group was 45.8years. The median duration of fistula was 7.5years and 5.3years for the child birth group and the non child birth group respectively. Fifty-seven percent of the childbirth group were still married as against 60.6% for non child birth group. The prevalence of childlessness was 25% and 47% for the child birth group and the non childbirth group respectively. The prevalence of secondary amenorrhoea was 22% and 41% in the SCBG and NCBG respectively.

Conclusion: Despite the limitation of this cross-sectional quantitative study, its findings calls for a more elaborate study on the social context of obstetric fistula in south east Nigeria.

Keywords: Unrepaired obstetric fistula; Childbirth; Nigeria

Introduction

In the developing countries VVF is considered as a significant public health challenge to safer motherhood because the magnitude of the problem is immense [1].

Obstetric fistula occurs rarely in the developed nations of the world and has a greater burden in Africa and Asia. The exact prevalence of Obstetric fistula in Nigeria is unknown, but Nigeria is reported to have probably the greatest burden of obstetric fistula worldwide with an estimated 100,000 to one million client [2,3]. Some estimates have reported a minimum of 2-5 OF per thousand deliveries when the mother survives [3]. A hospital prevalence rate of 0.44 per 100,000 deliveries was reported from a Teaching Hospital in Abakaliki, Southeast Nigeria [2]. The true burden of fistula may remain difficult to determine because of the associated stigmatization and the patients are often ostracised.

The condition is associated with grave medical and social consequences. Several studies have reported a high fetal wastage rate, infertility, childlessness, amenorrhoea, obstetric palsy, maternal disharmony and divorce as some of the medical and social consequences [4,5]. Though some studies have documented sexually activity [6,7] among unrepaired fistula clients there is paucity of data in the literature relating to childbirth among women with unrepaired obstetric fistula,

This study thus seeks to provide information on the prevalence of childbirth among Obstetric fistula survivors with unrepaired fistula (Childbirth group-(CBG) and equally seeks to compare their profile with the profile of the remaining population of obstetric fistula survivors who were unable to achieve childbirth with unrepaired obstetric fistula (Non childbirth group-(NCBG)).

Materials and Methods

This cross sectional study was conducted from January

2009-February 2010 in the Southeast Fistula Centre Abakaliki. The Southeast Fistula Centre, Abakaliki, is a ninety bedded Fistula Hospital established in December 2008 by the Mother and Child Care Initiative, A Program of the Government of Ebonyi State. It serves as a referral centre for Fistula clients from the Southern Part of Nigeria and the adjoining states of the middle belt region of Nigeria.

It was a total population study of all 282 consenting obstetric fistula clients who have had no previous attempts at repairing the fistula. A questionnaire was developed in order to obtain relevant information about a number of socio-demographic characteristics. The questionnaire was developed in English language and translated into Igbo Language, the predominant language of the geopolitical region and then back translated into English language to capture the correct desired meaning. A team of female medical staff were the research assistants. They were Igbo's and were trained on the questionnaire and the translation of the questionnaire into the Igbo language and the back translation into English language. The questionnaire was administered in Igbo language to all the clients who were Igbo's by the trained assistants on a one to one basis by the patient's bed side which offered privacy. The patients were examined in the theatre and the size and anatomic location of the fistula was described. Due to the difficulty in

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Received March 03, 2014; **Accepted** March 27, 2014; **Published** March 31, 2014

Citation: Adeoye IS, Egwu N, Adeoye J (2014) Subsequent Childbirth among Obstetric Fistula Survivors with Unrepaired Fistulas in South Eastern Nigeria. J Women's Health Care 3: 174. doi:10.4172/2167-0420.1000174

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establishing miscarriage without a confirmation of pregnancy among the study population, women who achieved subsequent childbirth with unrepaired obstetric fistula was regarded as proof of subsequent reproductive performance with unrepaired obstetric fistula. Women with history of miscarriages (unconfirmed pregnancies) were excluded from the study.

Ethical Clearance

Ethical clearance for the study was obtained from the ethical committee of South East Fistula Centre Abakaliki. Informed consent was obtained from the clients.

Data

Variables

Information regarding the age of the patients, duration of fistula from the time of occurrence to the time of presentation at the Fistula Centre, marital status, parity, number of living children, no of childbirth before and after the development of Obstetric Fistula, mode of delivery and menstruation. The weight and height of each client was determined. The anatomic location and size of the fistula was determined by the fistula surgeon.

Statistical analysis

Data was analysed using SPSS for Windows version 10.0, (SPSS Inc Chicago Illinois, USA). Analysis included frequency, cross tabulations, calculation of means. Difference in proportion was evaluated using the Chi-square test. Statistical significant was achieved at $P < 0.05$.

Results

A total of 282 consenting Obstetric fistula survivors were recruited over the study period. Eighty-five (30%) achieved a pregnancy and had 236 subsequent childbirths in the presence of unrepaired obstetric fistula. The profile of the subsequent child birth with unrepaired fistula group (SCBG) was compared with the profile of the women with no birth in the presence of an unrepaired obstetric fistula group (NCBG).

Age at presentation

The median ages for the SCBG and the NCBG were 45.8 and 36.4 years respectively. The difference in the median was statistically significant. $P < 0.000088$? (Table 1).

Number of subsequent childbirth in the presence of unrepaired obstetric fistula

There were a total of 236 subsequent childbirths in the face of unrepaired OF with 150 stillbirths (63.6%). Thirty-two clients (37.6%) had a delivery, 36(42.4%) had 2-4 deliveries after development of the fistula, while 17clients (20%) had 5 or more deliveries (Table 2).

Marital status

Among the SCBG, 83(97.6%) were married as the time of development of the fistula and Two (2.4%) women were single and the two remained single till date. Currently, only 48(56.5%) were married and 14 clients (15.5%) were separated from their husbands on account of the fistula and 21clients were widows.

Among the NCBG, 172(88.2%) were married as at the time of development of the fistula while 23(11.8%) were single. Currently 118(60.6%) were married, 23(11.8%) were single, 38(19.4%) were separated and 16(8.2%) were widows.

Mode of delivery

Eighty-five patients with unrepaired fistula had 236 subsequent childbirths. Two hundred and three (85.9%) of these births were SVD and 33(14.1%) were by caesarean section.

Number of living children

Among the childbirth group, 21(24.7% were childless, 20(23.5%) had one living child, 36(42.4%) had between 2-4 children while 8(9.4%) had 5 or more living children. These women had a total of 141 living children. For the non childbirth group, 93(47.2%) had no living child, 35(17.8%) had one living child, 54(27.4%) had between 2-4 living children, and 15(7.6%) had five or more children (Table 3). This group of fistula survivors had a total of 221 living children

Amenorrhoea after development of obstetric fistula

Among the women with unrepaired OF and subsequent childbirth 88.2 % (75) were still menstruating while 11.8% (10%) had secondary amenorrhoea after development of obstetric fistula. Conversely among the patients with no childbirth and unrepaired OF, 58.9% (118) continued to menstruate while 40.1% (79) developed secondary amenorrhoea P value =0.000026.

AGE (Years)	SCBG + OF		NCBG + OF	
	No	%	No	%
10 – 14	0	0	1	0.5
15 – 19	0	0	9	4.6
20 – 24	1	1.2	17	8.6
25 – 29	8	9.4	35	17.8
30 – 34	14	16.5	25	12.7
35 – 39	8	9.4	30	15.2
40 – 44	9	10.5	22	11.2
45 – 49	10	11.8	15	7.6
≥ 50	35	41.2	43	21.8
TOTAL	85	100	197	100
Mean and Std dev	42.94118 ± 9.38		36.85 ± 12.59	
t-test = 4.005 Pvalue=0.000088				
Median	45.75	36.42		

Table 1: Age Distribution.

Number of childbirth	No	%
1	32	37.6
2-4	36	42.4
≥ 5	17	20
TOTAL	85	100

Table 2: Number of subsequent childbirths after development of obstetric fistula.

Number of Children	SCBG + OF		NCBG + OF		Z-test	P-value
	No	%	No	%		
0	21	24.7	93	47.2	3.533	0.000
1	20	23.5	35	17.8	1.121	0.262
2-4	36	42.4	54	27.4	2.470	0.014
≥ 5	8	9.4	15	7.6	0.506	0.613
TOTAL	85	100	197	100		
Mean and standard deviation	2.16 ± 1.99		1.53 ± 2.10			

Chi-square=12.838
P-value=0.005

Table 3: No of Living Children.

Duration of fistula

The median duration of fistula was 7.5years and 5.3years respectively for the subsequent childbirth group and the non childbirth group and the observed difference was statistically significant ($P < 0.05$) (Table 4).

Location of fistula

In the both groups, juxtacervical fistula was the predominant fistula type, 28.2% and 24.3% respectively (Table 5).

Size of fistula

In the subsequent childbirth group, 27(31.8%) clients had fistula size ≤ 2 cm, 36(42.4%) clients had fistula size of between 2-4 cm, and 22(25.8%) clients had fistula size > 4 cm.

In the non childbirth group, in 71(35%) clients the fistula size was ≤ 2 cm, 93(47.3%) was between 2-4 cm and 33(16.7%) clients had fistula size > 4 cm.

Discussion

Several studies in the literature have documented sexual activity among clients with obstetric fistula but fewer studies have evaluated reproductive performance after repair of obstetric fistula [7]. There exists even greater paucity of data in the literature about the reproductive performance of clients with unrepaired obstetric fistula. The childbirth rate among unrepaired obstetric fistula survivors in this study was 30% and this finding is close to the rate of 21% reported among repaired fistula clients in Lagos South west Nigeria over 3 decades ago [8]. This

finding is however surprising as the combination of vaginal scarring and associated dyspareunia, reduced coital exposure, cervical injury, amenorrhoea were expected to reduce further the rate of fertility in this women. A related study from northern Nigeria included women who became pregnant after successful fistula closure with women who became pregnant with unrepaired fistula draw attention to sexually activity and possibility of childbirth among women with unrepaired obstetric fistula [7].

Some studies have highlighted the gynaecologic injuries associated with obstetric fistula to include vaginal scarring and a sonographic study from Nigeria had detected vaginal fibrotic changes in 32% of clients and minor vaginal fibrosis in 36% of cases [9]. There is no doubt that vaginal scarring will impact on sexual function and the functionality of the vagina which is an important concern in normal healthy marital relationships may assumably play a role in the reported high rates of marital separation among women with obstetric fistula. Interestingly, 57% and 61% respectively of the childbirth group and the non childbirth group were still married as at the time of the study and it would have been interesting to evaluate the association between the degree of vaginal scarring and the rate of divorce more critically, though a higher separation/divorce rate among women with more vaginal scarring would be expected. The childbirth rate is equally more surprising because of the fact that the predominant anatomical location of the fistula was juxtacervical in both groups. One would have expected some adverse effect on the spermatozoa particularly on the quantity of spermatozoa available for fertilization because of the effect of uncontrolled flow of urine into the vaginal on the ejaculate deposited in the vaginal. Equally, the effect of urine on the ejaculate and the spermatozoa in this group of women is an area for further research.

Some other studies have reported the prevalence of secondary amenorrhoea in clients with obstetric fistula to be between 25% - 63.1% and in this study, the overall rate of secondary amenorrhoea was 32% [8-12]. It was interesting to note however that the fistula survivors with childbirth had a statistically significant lower rate of amenorrhoea than the rest of the study population [12]. The causes of amenorrhoea in women with obstetric fistula would include malnutrition, psychological upsets, hypothalamic or pituitary dysfunction, intrauterine scarring and Asherman's syndrome. Though an evaluation of the cause of secondary amenorrhoea in the study population was beyond the scope of this study, the finding of a statistically significant difference between the childbirth group and the non childbirth group makes it tempting to infer that the gynaecologic injury may have been worst in the rest of the study population (non childbirth group) who were unable to achieve a subsequent pregnancy. Indeed some studies have related worsening surgical outcomes in fistula clients who have vaginal scarring than in those who do not [13,14]. In majority of clients, the size of the fistula was above 2 cm, which indicates that urinary incontinence was obviously an issue and it is likely that the level of personal hygiene of the clients may have been such that the odour of the urine was not an impediment to sexual relations.

The study also reaffirms the previously held view that OF is a commoner problem among primiparous women as about half of the study population developed fistula during their first pregnancy. The number of grand multiparous survivors in this study similar to reports from other related studies is worrisome and perhaps suggests the need for increased contraceptive prevalence as an effective tool for the reduction of OF [15]. The significant difference in parity between the two groups of women in the study would suggest a greater fertility potential for the childbirth group prior to development of obstetric fistula. The study showed about 40% of the childbirth group had a child

DURATION (Years)	SCBG + OF		NCBG +OF		Z-test	P-value
	No	%	No	%		
≤ 1	0	0	40	20.3	4.485	0.000
$> 1 - 5$	13	15.3	62	31.5	2.821	0.005
6 - 10	25	29.4	42	21.3	1.465	0.143
11 - 14	10	11.8	13	6.6	1.454	0.146
15 - 19	11	12.9	10	5.1	2.309	0.021
≥ 20	26	30.6	30	15.0	2.967	0.003
TOTAL	85	100	197	100		
Mean and standard deviation	13.44 \pm 8.02		30.34 \pm 35.70			
t = 1.22 P-value = 0.223 Median	7.5		5.27			

Chi-square = 38.669
P-value = 0.000

Table 4: Duration of Fistula.

TYPES	SCBG + OF		NCBG + OF		Z-test	P-value
	No	%	No	%		
Juxta cervical	24	8.2	54	25.8	0.142	0.887
Circumferential	10	11.8	35	16.8	1.263	0.207
Juxta urethra	22	25.9	41	19.3	0.938	0.348
Mid vaginal	17	20.0	25	11.7	1.582	0.114
Intra cervical	10	11.8	40	18.8	1.723	0.085
Recto vaginal fistula	2	2.3	2	0.5	0.872	0.383
Combined	0	0.0	3	7.1	1.144	0.253
Total	85	100	197	100		

Chi-square=8.693
P-value=0.192

Table 5: Location of fistula.

birth afterwards while about a fifth had five or more deliveries after developing the fistula. Though 40% of the entire study population had no living child, the number of living children was higher as expected in the women with subsequent childbirth after obstetric fistula. Childless women are more likely to be divorced by their husbands as a result of their disorder, than women with living children and so it would appear that the presence of children can mediate the physical stress that threatens to overwhelm the coping abilities of the parent [6].

Among the unrepaired fistula survivors with subsequent child birth, the Caesarean section rates appear to have remained similar before and after the development of obstetric fistula. The fetal wastage rate in subsequent deliveries was equally unacceptably high, as close to 65% of the subsequent deliveries were stillbirth. This underscores the need for antenatal care and possible delivery by Caesarean section for these women whose pelvis may be inadequate. A study from northern Nigeria conducted among women with successful repair of fistula suggested an increase in the mean fetal birth weight and reduced incidence of low birth weight. Some related studies have demonstrated that though vaginal delivery is possible in women with successfully repaired fistula, the maternal and fetal outcomes are unfavourable and thus elective Caesarean section provides better outcomes [6,8].

Conclusion

Despite the limitation of this cross sectional quantitative study which include recall bias among the clients, interviewer bias, the study still provides a basis for a better understanding of some medico-social aspects of obstetric fistula. It gives an insight into the rate of childbirth among unrepaired obstetric fistula clients and evaluates the comorbidity of amenorrhoea.

Acknowledgements

We acknowledge the kind contribution and resolve of the government of Ebonyi State, the wife of the governor of Ebonyi State, USAID Acquire Fistula Care Project, UNFPA, UNICEF and indeed the good people of Ebonyi State to end the Scourge of obstetric fistula in the Ebonyi state and southern Nigeria, through their commitments to the South east fistula centre.

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