Prevalence, profile and obstetric experience of fistula patients in Abakaliki, Southeast Nigeria

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Abstract

Objective. Fistula has always been thought to be a scourge of the Northern region of Nigeria only. This study was aimed at providing data on the prevalence, profile and obstetric experience of fistula patients in Abakaliki, Southeast Nigeria and to demonstrate that fistula is also a burden in the southern parts of Nigeria.

Materials and Methods. This was a prospective descriptive study conducted between 2003 and 2009. Sample size and sampling method. Four hundred and sixty-two fistula patients who were operated at the Fistula Unit of the Teaching Hospital and later at the Southeast Fistula Centre was consecutively recruited and interviewed during the study period.

Results. The prevalence of fistula was 4.3%, the mean age was 35±9.5 years and 8.4% was less than 20 years, majority of them had no formal education. A quarter had no occupation and majority had no regular monthly income. Twenty percent were married by the age of 14 years and majority were multiparous. In about 40%, the fistula occurred during the first child birth. About 34% were still sexually active and 30% of the married clients had achieved childbirth after development of fistula. The average height and weight were 1.47m±0.08 and 46.4kg±7.2 respectively. Majority had fistula following prolonged obstructed labour, though 42.6% eventually had caesarean section for prolonged obstructed labour. Majority of the patients were older, had a longer urine leakage and presented latter for corrective surgery than those reported from other parts of Nigeria.

Conclusions. There is a high prevalence (43.6/1000 deliveries) of obstetric fistula in this Centre, and majority of the vesico-vaginal fistula (VVF) was due to prolonged obstructed labour. Majority of the patients were older, had a longer urine leakage and presented latter for corrective surgery than those reported from other parts of Nigeria. However, 30% of the married patients achieved a pregnancy and delivered vaginally even in the presence of the fistula.

Introduction

In many Nigerian communities, less than 50% of births are supervised by skilled birth attendants, and access to emergency obstetrics care is limited.[1] These contribute tremendously to maternal mortality and morbidity. Obstetric fistula (OF), a sequel of prolonged obstructed labour, is a sad reflection of this poor state of maternal health care.[2-5] OF refers to vesico-vaginal fistula (VVF) and recto-vaginal fistula (RVF) that follows childbirth.[6]

VVF is an abnormal communication between the bladder and the vagina resulting in a continuous leakage of urine from the vagina.[2] Obstetric causes of VVF include prolonged obstructed labour, and complication of caesarean section.[7-8] Non obstetric causes of VVF include radiotherapy, gynaecological malignancies, and gynaecological surgery. The non-obstetric causes are commoner causes of fistula in developed countries.[9]

The precise incidence of VVF is difficult to estimate largely due to the paucity of community based estimates.[10] Furthermore, the stigma associated with the disease may prevent affected women from seeking help. However, it has been estimated that about 50,000 to 100,000 women develop VVF yearly, most of them in sub-Saharan Africa and Asia.[2,11] Earlier reports on VVF from Nigeria emanated from the northern part of the country thereby giving the impression that VVF was exclusively dominant in the northern part of Nigeria.[12-14] However, emerging reports indicate that VVF are equally prevalent in other parts of Nigeria.[3,7,15]

In this study, we document our experiences of VVF in the Southeastern part of Nigeria. Specifically we report on the prevalence, profile and obstetric experience of fistula patients in the Southeast VVF centre in Abakaliki Nigeria.

Materials and Methods

Background

This study, which took place between 2003 and 2009, started in the Ebonyi State University Teaching Hospital (EBSUTH) but extended to the Southeast Fistula Centre. EBSUTH is a tertiary health care institution with a very strong Obstetrics and Gynaecology department. It is a 350 bedded hospital located in the Government Reserved Area (GRA) part of Abakaliki the capital of Ebonyi State, Southeast Nigeria, and renders specialty care in all major specialties of medicine. The VVF unit was started in the year 2003.

The Southeast Fistula Centre started in the year 2008 as a result of the success of the EBSUTH VVF Unit in fistula repair. The attention of the wife of the governor of Ebonyi State was drawn to the plight of the VVF victims. This led to a state-wide campaign that resulted in the building of the Southeast Fistula Centre in 2008. This centre is a 90-bedded fistula hospital located within the premises of Ebonyi State University Teaching Hospital Abakaliki. It serves as a referral centre for fistula repair for clients from the South-east, South-south, South-west and North-central geopolitical zones of Nigeria. In addition, the Centre serves as a centre for the training of medical and paramedical personnel in the area of fistula repair and other maternal health service provision.

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Study design

This was a prospective descriptive study.

Sample size and sampling technique

The sample size (462) consisted of all the fistula patients who were seen at the VVF unit of EBSUTH and latter, the Southeast Fistula Centre within the study period. The patients were serially recruited as they presented.

Data collection instrument

Data was collected using a pre-tested structured questionnaire. As most of the respondents were illiterate, the original version of the questionnaire was given to language experts at Ebonyi State University who translated it to the local vernacular language. This vernacular version was re-translated to the English language by another group of experts and compared with the original version to test for and ensure consistency. Where there was any discrepancy, the two expert groups were convened to sort out the difference until a compromise word was agreed on.

The questionnaire elicited information on the socio-economic and demographic characteristics of the patients, their obstetric history particularly the obstetric events associated with the development of the fistula, and the psycho-sexual and economic burden associated with the development of the fistula. The questionnaire was pre-tested in a pilot study involving 50 patients recruited from three communities in Ebonyi State at the beginning of the study. Their responses were used to modify some of the questions that were ambiguous.

Data collection and analysis

Data was collected in an interviewer-administered fashion by trained research assistants under the direct supervision of the first author. Data collection took place usually during the interval of patient work-up for surgery. The data was analyzed using EPI INFO version 3.3.2 soft ware. Analysis was done using frequency distributions and simple percentages.

Ethical clearance

Ethical clearance for the study was obtained from the ethical committee of the South East Fistula Centre, Abakaliki. Verbal informed consent was obtained from each patient before data collecting. All efforts were made to ensure confidentiality of all information obtained from the patient.

Results

A total of 462 VVF cases were repaired in EBSUTH and the Southeast National VVF centre. During the same time period, a total of 10,641 deliveries were conducted in the Teaching hospital. This gives a hospital prevalence rate of 4.3%.

Socio-demographic characteristics of the fistula patients

Age

The age range of the patients was from 15-80 years with a mean of 35±9.5 years. The modal age class was the 20-39 year age class which constitute 50.2% of the respondents (Table 1).

Marital status, type of marriage and the wife position of the patient

The majority (281, 60.8%) of the patients were married, 66 (14.3%) were widowed, 58 (12.5%) were separated/or divorced from their husbands while 57 (12.3%) were single (Table 1). Polygamous marriage was the commonest type of marriage practiced by the respondents. Thus, among the 405 respondents who were ever married, majority 221 (54.6%) were in polygamous marriages while 184 (45.4%) were in monogamous marriages. Among those in polygamous marriages, 195 (88.2%) were in marriages with one or two other co-wives while 26 (11.8%) were in marriages with 3 or more co-wives. The wife position of the patient in these polygamous marriages show that majority of them were first wives of their husbands. Thus, among the 281 respondents who were currently married, 172 (61.2%) were the first wife, 79 (28.1%) were second wives, 20 (7.1%) were 3rd wives, and 10 (2.4%) were ≥4th wives (Table 1).

Educational status

The majority (274, 59.3%) of the patients had no formal education; 149 (32.3%) had primary school education; 37 (8%) had secondary school education while only 2 (0.4%) had tertiary education.

Religious affiliation

Christianity was the dominant religion amongst the patients. Thus, the majority (442, 95.7%) were Christians, 13 (2.8%) were of the African traditional religion, while 7 (1.5%) were Moslems.

Parity

The majority (172, 37.2%) of the patients were multiparous, 146 (31.6%) were grand-multiparous, 138 (29.9%) were primigravidae, and 6 (1.3%) were nulliparous.

Height

Height is an important predisposing factor in the aetiology of VVF. The height of 1.50 metres is the threshold height. The majority (297, 64.3%) of the respondents were less than 1.50 metres tall while 165 (35.7%) were more than 1.50 metres tall. The average height for the patients was 1.47±0.08 m.

Occupation

The majority (268, 58%) of the patients were farmers, 31 (6.7%) were traders, 30 (6.5%) were artisans, 14 (3%) were students and 2 (0.4%) were civi1 servants. About a quarter (117, 25.3%) were unemployed.

Table 1. Socio-demographic characteristics of vesico-vaginal fistula patients.

Characteristic	Frequency	%
Age class		
<20 years	39	8.4
20-39 years	232	50.3
≥40 years	191	41.3
Marital status		
Married	281	60.8
Widowed	66	14.3
Separated/Divorced	58	12.6
Single	57	12.3
Type of marriage (n = 405)		
Polygamy	221	54.6
Monogamy	184	45.4
Wife position in polygamous marriages (n = 281)		
First wife	172	61.2
Second wife	79	28.1
Third wife	20	7.1
≥ Fourth wife	10	2.4
Educational status		
No formal education	274	59.3
Primary education	149	32.3
Secondary education	37	8.0
Tertiary education	2	0.4
Religion		
Christianity	442	95.7
African traditional religion	13	2.8
Islam	7	1.5
Parity		
Multipara	172	37.2
Grand multipara	146	31.6
Primigravida	138	29.9
Nullipara	6	1.3
Height		
<1.50 meters	297	64.3
>1.50 meters	165	35.7
Occupation		
Farmers	268	58.0
Traders	31	6.7
Artisans	30	6.5
Students	14	3.0
Civil servants	2	0.4
Unemployed	117	25.3
Age at first marriage (n = 263)		
<14 years	92	35.0
15-29 years	108	41.1
20-34 years	63	23.9
Age at first delivery		
<18 years	132	28.6
18-29 years	105	22.8
≥30 years	6	1.3
Unknown	219	47.4

Age at first marriage and first delivery

Data shows that early marriage and young age at first delivery was common among the patients. Thus, 92 (20%) were married at or before the age of 14years, 108 (23.4%) were married between the age of 15 and 19 years and 63 (13.6%) were married between the age of 20 and 34 years. However, majority 199 (43.0%) of the respondents did not know their age at first marriage. Similarly, 132 (28.6%) delivered before the age of 18 years; 105 (22.8%) delivered between the age of 18 and 29 years while 6 (1.3%) delivered between the age of 30 and 35 years. Nearly half (219 or 47.4%) did not know their age at first delivery.

Obstetric events leading to the vesico-vaginal fistula

The obstetric events leading to the VVF are represented in Table 2.

Parity at vesico-vaginal fistula occurrence

Majority of the VVF occurred at the first pregnancy. Thus, 180 (38.9%) of the fistula occurred during the first pregnancy, 162 (35.1%) occurred during the 2nd-4th pregnancy, while 114 (24.7%) occurred during the 5th pregnancy and beyond, 6 (1.3%) of the VVF occurred amongst nullips.

Source of ante-natal care and delivery services received by the patients

Data shows that many of these patients received antenatal care services from formal health facilities but delivered outside these facilities. Thus, though 229 (50.2%) of the patients received ante-natal care at a formal health facility, 326 (71.5%) laboured at home, 76 (16.7%) laboured in a maternity home/primary health care centre and only 54 (11.8%) laboured in the hospital.

Duration of labour

The majority of the patients had prolonged labour. Thus, 243 (53.3%) of the patients laboured for over 48 h, 59 (12.9%) laboured for 24-48 h, 110 (24.1%) laboured for 8-24 h and only 44 (9.6%) laboured for less than 8 h.

Mode of delivery

The majority of the patients delivered through Caesarean section. Thus, 197 (42.6%) of the patients were delivered through caesarean section, 169 (36.6%) had spontaneous vaginal delivery, 88 (19.1%) had instrumental vaginal delivery and 2 (0.4%) pregnancies ended in abortions.

Duration of urethral catheterization following prolonged labour

Urethral catheterisation was done in 223 out of the 397 (56.2%) patients who had prolonged obstructed labour. The length of catheterization was less than one week in 8 (3.6%) patients; one week in 59 (26.5%) clients; two weeks in 59 (26.5%) clients; three weeks in 21 (9.4%) patients; four weeks in 45 (20.2%) patients; 12 weeks in 20 (9.0%) patients; and 24 weeks in 11 (4.9%) patients.

Aetiology of vesico-vaginal fistula, onset and duration of urine leakage

Aetiology of fistula

The majority (396, 85.7%) patients had fistula following prolonged obstructed labour, 60 patients (12.9%) had iatrogenic fistula, 3 (0.7%) had fistula following circumcision and 3 (0.7%) had traumatic fistula. The iatrogenic fistulae were cases that followed caesarean section and vaginal hysterectomy. The traumatic fistula occurred from road traffic accident in two cases and in the third case, by the insertion of a tiny metal rod into the vagina of a little girl by her playmate (Table 3).

Onset of urinary leakage

Leakage of urine started immediately after delivery in 220 (49.1%) patients, within five days of delivery in 130 (28.1%) patients, within 6-10 days in 37 (8%) patients, within 11-14 days in 28 (5.8%) patients and after 14 days in 41 (8.9%) patients (Table 3).

Table 2. Obstetric events leading to the vesico-vaginal fistula.

	Frequency	%
Parity at vesico-vaginal fistula occurrence		
Para 1	180	38.9
Para 2-4	162	35.1
≥Para 5	114	24.7
Nulliparous	6	1.3
Source of ante-natal care (n=456)		
Formal health facility	229	50.2
Traditional birth attendants	227	49.8
Place of delivery (n = 456)		
Hospital	54	11.8
Maternity home/Primary health care centre	76	16.7
Home/Traditional birth attendants' place	326	71.5
Duration of labour		
<8 hours	44	9.7
8-24 hours	110	24.1
>24 hours	302	66.2
Mode of delivery		
Instrumental delivery	88	19.4
Spontaneous vaginal delivery	169	37.2
Caesarean section	197	43.4

Table 3. Aetiology of vesico-vaginal fistula, duration of catheterization, onset of urine leak and duration of leak before presentation for corrective surgery.

	Frequency	%
Aetiology of vesico-vaginal fistula		
Prolonged obstructed labour	396	86.7
Iatrogenic	60	12.9
Circumcision	3	0.7
Trauma	3	0.7
Duration of catheterization (n=223)		
<1 week	8	3.6
1 week	59	26.5
2 weeks	59	26.5
3 weeks	21	9.4
4 weeks	45	20.2
12 weeks	20	9.0
24 weeks	11	4.9
Onset of urine leak		
Immediately following delivery	220	48.3
1-5 days following delivery	130	28.5
6-10 days following delivery	37	8.1
11-14 days following delivery	28	6.1
>14 days following delivery	41	8.9
Duration of leak before presentation for surgical repair		
1-5 years	179	38.7
6-10 years	109	23.6
>10 years	174	37.7

Duration of urine leakage before presentation for vesico-vaginal fistula repair

The mean duration of urine leakage before presentation for corrective surgery was 13.5±7.2 years. However, 179 (38.7%) presented within 1-5 years of leakage, 109 (23.6%) presented within 6-10 years of leakage while 174 (27.5%) presented after 10 years of leakage (Table 3).

Psycho-sexual and economic burden of the patients

Sexual activity since onset of vesico-vaginal fistula Generally, majority 304 (65.8%) patients were no longer sexually active following the development of the VVF while 158 (34.2%) were still sexually active inspite of the fistula.

Reasons for not being sexually active as at the time of presentation

The reasons for sexual inactivity were as follows: Eighty-one clients (26.7%) lost interest in sex because of the fistula, 49(16.1%) because of old age, fear of another pregnancy 39 (12.8%), widowed 38 (12.5%), patient lost interest in sex 27 (8.9%), husband lost interest in sex 22 (7.2%), separated from husband 21 (6.9%), afraid sex would worsen fistula 20 (6.6%), and unmarried 7 (2.3%). Table 4.

Source of support since the onset of the vesico-vaginal fistula

Nearly half (227, 49.2%) of the patients received financial assistance from someone while 235 (50.8%) did not since the development of the VVF. Family, Church and friends were the main sources of assistance for these patients. Thus, of the 227 who received financial assistance, 125 (55.1%) was from husbands, 39 (17.1%) was from other relations, 37 (16.3%) was from parents, 22 (9.7%) was from the Church and 4 (1.8%) was from friends (Table 4).

Table 4. Psycho-sexual and economic burden of vesico-vaginal fistula patients.

	Frequency	%
Psycho-sexual burden		
Sexually active	158	34.2
Sexually inactive	304	65.8
Reason for sexual activity (n=304)		
Lost interest because of the Fistula	81	26.7
Old age	49	16.1
Fear of another pregnancy	39	12.8
Widowed	38	12.5
Patient lost interest in sex	27	8.9
Husband lost interest in sex	22	7.2
Separated from husband	21	6.9
Afraid sex would worsen the fistula	20	6.6
Unmarried	7	2.2
Economic burden		
Received financial support	227	49.2
Received no financial support	235	50.8
Source of financial support (n = 227)		
Husband	125	55.1
Other relations	39	17.1
Parents	37	16.3
Church	22	9.7
Friends	4	1.8

Discussion

We recorded a hospital obstetric fistula prevalence of 43.4 per 1000 deliveries. This is higher than the reported hospital prevalence in other studies from Nigeria.[16-17] In Zaria Ijaiye16 reported a prevalence of 1.1 per 1000 deliveries while Harrison[17] reported a prevalence of 3.5 per 1000 in Zaria. In Ghana, Danso,[18] reported a prevalence of 1 per 1000 deliveries. This rather high hospital prevalence in our study may be due to the wide catchment area of our fistula centre. We receive referrals from four out of the six geopolitical regions of Nigeria. Furthermore, being the first and only one of its kind in the region, the centre which is less than eight years old has had to attend to fistula patients that have accumulated over many years or decades. This fact is collaborated by the mean age of the fistula patients and the mean duration of the fistulae.

The mean age for the fistula clients in this study was 35±9.5 years and this differs significantly from the mean age of 23.9 years reported in Ilorin[16] and also from the median age of 16 years reported from Kano, Nigeria.[19] Majority of the clients were aged between the ages of 20-39 years at presentation to the fistula hospital and a significant 41% of the clients were more than forty years of age as at presentation. The mean duration of urine leakage was 13.5±7.2 years. The late presentation is attributable to the initial lack of access to a VVF repair centre and the social stigma associated with VVF.

Eighty-five percent of the clients developed fistula from prolonged obstructed labour and this agrees with previously documented aetiological factors.[2,5,12,20] Access to emergency obstetric care is essential in preventing prolonged obstructed labour and subsequent VVF. User fees for maternity services are a strong disincentive to access to emergency obstetric care in Nigeria. According to a World Health Organization report of 1991, women with fistula almost exclusively come from poor families and communities.[21] In our study over half of the fistula clients were farmers while a quarter of them had no visible means of livelihood and majority of them had no regular monthly income, while close to one fifth of them had a monthly income of less than seven dollars.

Particularly worrisome in this study is the percentage contribution of clients with iatrogenic fistula following gynaecological and obstetric procedures. This calls for closer supervision of medical and paramedical personnel to ensure that these care givers only perform procedures for which they have been duly trained. Other studies have documented a rising incidence of VVF from other causes.[7,22] Three clients developed VVF following female genital cutting. This is a sad reminder of the negative effects of this cultural practice which needs to be completely abolished.

The subsequent sexual and obstetric history of our clients after the development of the fistula is quite a surprising finding. About one third of the clients were still sexually active at presentation and 30% of the married clients had actually achieved a pregnancy and delivered vaginally in the face of the fistula. Very few reports document continued sexual activity by VVF patients and even subsequent vaginal delivery with coexisting VVF. This finding calls for more elaborate elucidation to determine the context in which continued sexual activity exists.

Conclusions and Recommendation

There is a high prevalence (43.6/1000 deliveries) of obstetric fistula in this centre, and majority of the VVF was due to prolonged obstructed labour. Majority of the patients were older, had a longer urine leakage and presented latter for corrective surgery than those reported from other parts of Nigeria. However, 30% of the married patients achieved a pregnancy and delivered vaginally even in the presence of the fistula.

This study, which documented the first

series of 462 cases managed in a regional fistula centre in Nigeria, highlights the continued scourge of poor access to maternal health care services and in particular emergency obstetric care. We therefore recommend that a holistic approach that will take cognizance of the several reasons for underutilization of emergency obstetric care services by our mothers particularly in the rural parts of the country where majority of the clients reside is important in the development of a framework that would lead to the reduction of the burden of obstetric fistula in the country.

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