

Original Research Article

Prevalence of anaemia in obstetric fistula patients in Abakaliki

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Received: 21 May 2018

Accepted: 27 June 2018

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ABSTRACT

Background: Obstetric fistula remains a devastating condition among economically marginalised members of the society. Anaemia can result from inadequate intake of nutrients due to poverty. The study aims to assess the prevalence of anaemia in obstetric fistula patients.

Methods: A retrospective study was carried out at the National Obstetric Fistula Centre, Abakaliki, Nigeria to determine the prevalence of anaemia among obstetric fistula patients. Data were retrieved from the case record of patients and analysis was done using SPSS version 20.

Result: Out of the 136 patients studied, 87 (63.9%) were petty traders and farmers. Eighty-nine (65.4%) were anaemic while 19 (13.9%) had packed cell volume of 30% and below.

Conclusion: Two-thirds of the patients were anaemic based on WHO's cut off and this is higher than global and local prevalence of anaemia in non-pregnant women. Therefore, it is reasonable to suspect anaemia in obstetric fistula patients and correction of same should start as early as possible in order to minimize the complications of anaemia in this group of patients.

Keywords: Anaemia, Haemoglobin, Obstetric fistula, Packed cell volume

INTRODUCTION

Obstetric fistula remains a distressing maternal morbidity characterised by uncontrollable leakage of urine and/or faeces through the vagina. Untreated obstetric fistula results in shattering and demoralising physical, health and social problems such as divorce, seclusion, and stigma by woman's husband and families.^{1,2} It is believed that 3 million people are living with unrepaired vesicovaginal fistula (VVF) and/or rectovaginal fistula (RVF) in low-resource countries worldwide due to enormous backlog of surgical repair, which is carried out by very few personnels.³ It is estimated that there are 30,000-130,000 new cases of VVF in Africa each year.³ One hundred thousand to one million Nigerians live with obstetric fistula with an annual incidence of 2.11 per 1000 births.⁴

Fistulae are mostly associated with prolonged obstructed labour in poor resource countries. This occurs when a baby's head becomes impacted in the maternal pelvis impeding blood flow and resulting in ischaemic necrosis and eventual fistula formation. Iatrogenic causes are now believed to be on the rise.⁵ Obstetric fistula is largely preventable, but common among the economically marginalised members of the society that is, the young, poor, illiterate, naïve girls and women in the rural areas where there is poor access to emergency obstetric care, family planning services, and skilled birth attendants.⁶ An Ethiopian study reported high divorce rates and low educational levels. Some patients in Addis Ababa travelled 700km or more and trekked for an average of 12.3 hours to reach the health facility. Many presents with other disabilities and pronounced weight loss.^{7,8}

Features of malnutrition are very obvious in an average obstetric fistula patient and studies have shown that this is a risk factor for anaemia. Anaemia is conventionally defined as a decrease in the ability of blood to carry oxygen due to a decrease in the total number of erythrocytes (each having a normal quantity of haemoglobin), a diminished concentration of haemoglobin per erythrocyte, or a combination of both.⁹ Globally, about 50% of anaemia cases are due to iron deficiency, where anaemia occurs as a result of inadequate intake of iron.¹⁰ Insufficient intake of vitamin B12 which is mainly derived from animal sources (which financially challenged obstetric fistula patients may not be able to afford) is another important cause of anaemia. Haemoglobin threshold used to define anaemia for non-pregnant women (15 years and above) is 120g/l which is equivalent to packed cell volume of 36%.¹¹

Despite the complications that may follow anaemia in obstetric fistula patients including poor post-operative wound healing, there is paucity of data on the prevalence of anaemia in these patients. Hence, the need for this study, which determines the prevalence of anaemia in obstetric fistula patients.

METHODS

Study design

This is a retrospective descriptive study carried out at the National Obstetric Fistula Centre, Abakaliki, Ebonyi State, South East Nigeria. The hospital serves as a referral centre for fistula repair for women from the South-east, South-south, South-west and North-central geopolitical zones of Nigeria. The hospital equally serves as a training centre for medical and paramedical personnel in the area of fistula repair and other maternal health service provision.

Data collection

A well-structured pro-forma was used to document information extracted from the case notes of all obstetric fistula patients attended to over a period of one year between August, 2016 and July, 2017.

Data analysis

Data was analysed using SPSS version 20. Simple frequencies and percentages were calculated.

RESULTS

A total of 136 obstetric fistula cases were operated between August, 2016 and July 2017 at the National Obstetric Fistula Centre, Abakaliki. One hundred and five patients accounting for 77.2% of the obstetric fistula cases had vesicovaginal fistula (VVF), while uterovesical fistula and rectovaginal fistula accounted for 11.8% and 8.8% respectively. Three patients (2.2%) had ureterovaginal fistula (Table 1).

Table 1: Type of obstetric fistula.

Type of obstetric fistula	Frequency	(%)
Vesicovaginal fistula (VVF)	105	77.2
Uterovesical fistula (UVF)	16	11.8
Rectovaginal fistula (RVF)	12	8.8
Ureterovaginal fistula	3	2.2

Table 2: Age class.

Age class	Frequency	(%)
<20 years	2	1.5
20-39 years	107	78.7
≥40years	27	19.8

The age range of the patients was 19-60 years with a mean of 32.96±8.96. Most patients were between 20 and 30 years of age (107, 78.7%) while only two patients were below 20 years (1.5%) and 27 patients (19.8%) were 40 years and above at the time of presentation (Table 2). Most patients (98, 72.1%) were married while 22 patients (16.2%) were separated or divorced. The same proportion of patients (8, 5.9%) were single and widowed (Table 3). Most married women (88.8%) were married in a monogamous setting while 11.2% were married in a polygamous setting. Forty patients (29.4%) had no formal education, 35 (25.7%) had only primary education, 47 (34.6%) had only secondary education while the smallest proportion of patients (14, 10.3%) had tertiary education (Table 4).

Table 3: Marital status.

Marital status	Frequency	Percentage
Married	98	72.1
Widowed	8	5.9
Separated/Divorced	22	16.2
Single	8	5.9

Table 4: Level of education.

Educational status	Frequency	Percentage
No formal education	40	29.7
Primary education	35	25.7
Secondary education	47	34.6
Tertiary education	14	10.3

Table 5: Patient's occupation.

Occupation	Frequency	Percentage
Farmer	35	25.7
Petty trader	52	38.2
Artisan	26	19.1
Student	3	2.2
Civil servant	9	6.6
Unemployed	10	7.4
Apprentice	1	0.7

One hundred and twenty-nine patients (94.9%) were Christians while Islam and African traditional religion made up the remaining 3.7% and 1.5% respectively. Most patients were petty traders (52, 38.2%) while farmers, artisans, civil servants, students and apprentices accounted for 25.7%, 19.1%, 6.6%, 2.2% and 0.7% of patients respectively. The unemployed group accounted for 7.4% of the population (Table 5). The husbands of most of the patients who were married were artisans (33, 33.7%) while 31(31.6%) were farmers. Traders and civil servants accounted for 33.7% and 11.2% respectively. Only 72 patients (52.9%) enjoyed husband's support while 64 patients (47.1%) did not enjoy husband's support.

The packed cell volume range was 25-43% with a mean of 35%, standard deviation of 3.004 and mode of 35. Nineteen patients (13.9%) had packed cell volume range of 25-30%, 70 patients (51.5%) had a range of 31-35%, 45 patients (33.1%) had values ranging from 36 to 40% while only 2 patients (1.5%) had values greater than 40%.

Table 6: Packed cell volume.

Packed cell volume (%)	Frequency	%
25-30	19	13.9
31-35	70	51.5
36-40	45	33.1
>40	2	1.5

DISCUSSION

Obstetric fistula is rare in technologically advanced nations of the world, but remains a distressing condition affecting millions of women in the developing world.⁴ Anaemia constitutes a major public health problem and is one the most important causes of disability worldwide.¹¹ This study assesses the commonness of anaemia among patients with obstetric fistula.

Most patients reviewed in this study had vesicovaginal fistula (77.2%) which is similar to what was found in previous studies.^{7,12} This is because most obstetric fistulae follow obstructed labour and badly supervised delivery as most of these women lack the financial wherewithal to seek care at the appropriate facilities.¹² The mean age in this study was 32.96±9.0 which is similar to the mean age of 35±9.5 found earlier at the study site.¹³ This is however different from the mean age of 23.9 years reported by Ijaiya et al in Ilorin, Nigeria.¹² About three-quarters of women studied were married while about 16% were divorced or separated. This is similar to what was found in a Zambian study, where three quarters of women with fistula were married and 15.1% were divorced.¹⁴

There was no formal education in about 30% of patients in this study. This is in keeping with earlier studies where it was discovered that level of education was significantly lower than the national averages.¹⁴ In this study about two-thirds of the patients were into farming and petty trading

and a significant number of them had no appreciable source of income. This is similar to what was found in previous studies in which it was noticed that over a quarter of the patients had no palpable means of livelihood and came from economically marginalised regions of the world.^{13,14}

About two-thirds of the patients in this study were anaemic based on WHO's cut off value of 36% packed cell volume in non-pregnant women (15-years and above).¹¹ About 14% had values of 30% and below. It is estimated that anaemia occurs in 42% of all women in the world and 52% of pregnant women in the developing countries compared with 23% in the developed world.¹¹ A study done in Lagos, Nigeria put the prevalence of anaemia in non-pregnant women of reproductive age group at 24.9%.¹⁵

It was therefore established in this study that the prevalence of anaemia in women presenting with various types of obstetric fistula is higher than the global prevalence and even far higher than the prevalence in the Southern part of the country where this study was carried out. Recurrent parasitic infections, poor nutritional intake, menstrual blood loss and repeated pregnancies have been implicated in the aetiology of anaemia in the developing-world.¹⁶ These factors, especially poor nutritional intake may be more pronounced in the obstetric fistula patients as these women are often poor and uneducated.

Considering the complications of anaemia (such as heart failure, pregnancy complications, depressed immune system, infection and poor wound healing) and its high prevalence in obstetric fistula patients, it will be a worthwhile endeavour to have a high index of suspicion in this group of patients and have the condition corrected right from outpatient clinic before embarking on surgical repair.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee of the National Obstetric Fistula Centre, Abakaliki

REFERENCES

- Mselle LT, Kohi TW, Mvungi A, Evjen-Olsen B, Moland KM. Waiting for attention and care: birthing accounts of women in rural Tanzania who developed obstetric fistula as an outcome of labor. *BMC Pregnancy Childbirth.* 2011;11:75.
- WHO. Department of Making Pregnancy Safer. *Obstetric Fistula: Guiding principles for clinical management and programme development.* Geneva: WHO Library cataloguing-in-publication data. 2006:11-30.
- Wall LL. Obstetric vesicovaginal fistula as an international public-health problem. *Lancet* 2006;368(9542):120-9.

4. Tsui AO, Creanga AA, Ahmed S. The role of delayed childbearing in the prevention of obstetric fistulas. *International J Gynaecology & Obstetrics.* 2007:S98-S107.
5. Raassen TJIP, Ngongo CJ, Mahendeka MM. Iatrogenic genitourinary fistula: an 18-year retrospective review of 805 injuries. *Int Urogynecol J.* 2014;25:1699-706.
6. Lewis G, de Bernis L. Obstetric fistula: Guiding principles for clinical management and programme development. *Integrated management of pregnancy and childbirth.* WHO Press. 2006:3-6.
7. Kelly J. Ethiopia: an epidemiological study of vesico-vaginal fistula in Addis Ababa. *World Health Stat Quart* 1995;48(1):15-7.
8. Kelly J, Kwast BE. Epidemiologic study of vesicovaginal fistulas in Ethiopia. *Int Urogynecol J.* 1993;4(5):278-81.
9. Bull BS. Morphology of the erythron, in Williams haematology. MA Lichtlman B. Beutler, TJ Kipps U. Seligsohn K. Kaushansky, and JT Prchal, Eds., McGraw-Hill, New York, NY, USA, 7th edition. 2006:369-385.
10. Benoist BD, McLean E, Egll I, Cogswell M. Worldwide prevalence of anaemia 1993-2005: WHO global database on anaemia. Worldwide prevalence of anaemia 1993-2005: WHO global database on anaemia. 2008.
11. World Health Organization. Iron deficiency anemia. assessment, prevention, and control. A guide for programme managers. 2001:47-62.
12. Ijaiya MA, Aboyeji PA. Obstetric urogenital fistula: the Ilorin experience, Nigeria. *West Afr J Med.* 2004;23:7-9
13. Sunday-Adeoye I, Okonta P, Ulu OL. Prevalence, profile and obstetric experience of fistula patients in Abakaliki, Southeast Nigeria. *Urogynaecologia.* 2011;25:20-4.
14. Holme A, Breen M, MacArthur. Obstetric fistulae: a study of women managed at the Monze Mission Hospital, Zambia. *BJOG.* 2007;1010-7.
15. Federal Government of Nigeria, UNICEF. The nutritional status of women and children in Nigeria. Lagos;1994.
16. Cheesbrough M. District laboratory practice in tropical countries (Part 2), 2nd Edition Update, Cambridge University Press. 2010:1-434.

Cite this article as: Adegoke AI. Prevalence of anaemia in obstetric fistula patients in Abakaliki. *Int J Res Med Sci* 2018;6:2611-4.