EPIDEMIOLOGY OF VESICO VAGINAL FISTULA IN MAIDUGURI

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ABSTRACT

Background: Vesico vaginal fistula commonly affects the poor, less educated, teenage group and those experiencing their first deliveries.

Objective: To determine the epidemiological variables r associated with vesico vaginal fistula.

Methodology: A total of 80 case records of VVF patients managed over a 10 year period were retrospectively studied. Relevant information pertaining to age, parity, and cause of VVF and outcome of management were retrieved from the case notes. The data was analyzed using SPSS package.

Results: VVF Constituted 1.4%, of the total Gynecological admissions and 8.0% of the major Gynecological surgeries performed during the period. The prevalence was highest among the Hausa/Fulani and the Kanuris. Majority (76.2%) were over 20 years, with a peak-age specific prevalence rate of 33.8% at the 20-24 years age group. Teenagers only accounted for 23.8%. Most patients sustained the VVF during their first childbirth (51.3%), by the second delivery 78.8% were involved. All the teenagers had only one delivery, while all the grandmultipara were 40 years and above. Ninety percent of them had no supervised antenatal care and had their deliveries at home under traditional birth attendant (TBAs). In about 90% prolong obstructed labour was the leading cause and most patients belong to the social class IV and V. Seventy five percent had successful repair, while about 50% were either divorced or neglected by their husbands.

Conclusion: Vesico-vaginal fistula remains one preventable medical/social calamity, now afflicting not just teenagers and primipara, but predominantly older and parous women. Public health education with the provision of accessible efficient intrapartum care is the cornerstone to eradicating this problem.

INTRODUCTION

Vesico-vaginal fistula (VVF), an abnormal communication between the vagina and the urinary bladder, leads to continuous leakage of urine that is not just a severe medical problem but a great social embarrassment to the patient[1]. It is the commonest fistula encountered as a consequence of poor or lack of appropriate obstetric interventions[1]. Beyond their medical problems, VVF patients have unpleasant experiences in the community. These are often associated with serious psycho-social consequences and unaffordable economic burdens on the patients. Such women face a triad of embarrassment from continuous leakage of urine, bereavement from loosing her child and the risk of loss of her husband due to the social stigma of the condition. It is one of the most dehumanizing conditions that afflicts women.[2, 3, 4] It is also usually associated with other morbidities such as foot drop, amenorrhea and gynaetresia.

The estimated incidence ranges from 1.4 to 4 per 1000 deliveries in West Africa,[5,6] with an estimated 150,000 women awaiting repair in sub-Saharan Africa[7]. This reflects the health care level of the area, which is characterized by poor obstetric services[7]. It is further compounded by poverty, illiteracy, ignorance, poor accessibility (bad road network and distant health facilities that are few) and hence poor utilization. Therefore, the majority of VVF in developing countries result from preventable obstetric trauma.[5,8,9]

This study was undertaken to determine the epidemiological variables and outcome in terms of treatment, social consequences and complications.

SUBJECTS AND METHODS

This retrospective study was carried out at the Department of Obstetric and Gynaecology of the University of Maiduguri Teaching Hospital, Maiduguri, which is the major

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referral center in North Eastern Nigeria. A total of 88 cases of VVF were managed over a 10-year period from January 1995 to December 2004.

Data pertaining to age, parity, literacy level, ethnicity, occupation of husband, booking status, possible aetiologic factors and outcome in terms of cure, complications and social consequences were collected. Standard occupational classification (OPCS) was used for social class classification.[10] The data was analysed for frequencies using SPSS version 11 statistical package.

RESULTS

VVF Constituted 1.4%, of the total Gynaecological admissions and 8.0% of the major Gynaecological surgeries performed during the period. Out of these, 80 case notes were available for analysis, a retrieval rate of 90 %.

Ethnic distribution shows that the prevalence was highest among the Hausa/Fulani, followed by the Kanuris, the predominant tribe in the area (40%), both of whom are almost exclusively Muslims. Illiteracy was a major problem, 68% being uneducated. Table 1 shows that the majority (76.2%) were over 20 years, with a peak-age specific prevalence rate of 33.8% at the 20-24 years age group. Teenagers only accounted for 23.8%. Most patients sustained the VVF during their first childbirth (51.3%), by the second delivery 78.8% were involved and 2 (2.5%) occurred after the fifth delivery. All the teenagers had only one delivery, while all the grandmultipara were 40 years and above. Seventy-two (90%) of them had no supervised antenatal care and had their deliveries at home under untrained traditional birth attendant (TBAs). The only 8 patients that were delivered in the hospital all had laboured at home before later recourse to the hospital.

Table 2 illustrates the social class of the patients, with the highest frequency (90%) in social class IV and V. None of the patients belonged to the social class I and II. The aetiologic factors associated with the disorder are shown on Table 3, prolonged obstructed labour was the leading cause with 68 (85%) patients, while instrumental vaginal delivery was identified as a cause in only 8 (10%). Gishiri cut and cervical cancer accounting for 2 (2.5%) patients each.

Sixty patients had successful repair and were discharged in good condition while 18 were unsuccessful at both first and second attempts. Common associated problems identified were secondary amenorrhoea and vaginal stenosis in 38 (59.4%) and 20 (31.6%) patients respectively. Foot drop and perineal tear were seen in 4 and 2 patients respectively, this is illustrated in table 4. In addition there were social consequences identified, 20 (25%) were divorced and 13 were neglected or separated from their husbands on account of the VVF they sustained.

TABLE 1: Demographic Factors

Factors		Number of Patients	Frequency (%)
1.	Age		
	Under 15	2	2.5
	15-19	17	21.3
	20-24	27	33.8
	25-29	12	15.0
	30-34	9	11.3
	35-39	8	10.0
	40-44	5	6.3
	Total	**80**	100
2.	Parity(after delivery)		
	1	14	51.3
	2	22	27.5
	3	11	13.8
	4	4	5.0
	≥5	2	2.5
	Total	80	100
3.	Delivery		
	Hospital	8	10.0
	Home	72	90.0
	Total	80	100
4.	Ethnic Groups		
	Hausa/Fulani	34	42.5
	Kanuri	32	40.0
	Others	14	17.5
	Total	100	100
5.	Literate		
	No	20	25.0
	Yes	60	75.0
	Total	80	100

TABLE 2: Social Class

Husband's Social Class	Number of Patients	Frequency (%)
Professional I	0	0
Managerial II	0	0
Skilled (non-manual) IIIN	3	3.8
Skilled (manual) IIIM	5	6.3
Partly skilled IV	32	40.0
Unskilled V	40	50.0
Total	**80**	**100**

TABLE 3: Aetiologic Factors

Factors	Number of Patients	Frequency (%)
Prolonged obstructed labour	68	85.0
Instrumental vaginal delivery	8	10.0
Gishiri cut	2	2.5
Cervical cancer	2	2.5
Total	80	100

Table 4: Common associated problems encountered by VVF Patients

Complications	Number of Patients	Frequency (%)
Secondary ammenorrhoea	38	47.5
Vaginal stenosis	20	25.0
Divorced	20	25.0
Separated	13	16.3
Foot drop	4	5.0
Perineal tear	2	2.5

DISCUSSION

There is a sharp distinction in the aetiology of urogenital fistulas between the developed and developing countries. While those in the developed countries are gynaecological in origin, they are almost exclusively obstetric fistulas in developing countries. Obstetric fistulas accounted for 97%, 98% and 100% of fistulas in previous studies reported from Ethiopia, Nigeria and West Africa respectively[1,3], compared to 5% and 0% from England and the USA respectively[1]. This reflects the poor obstetrics care in the developing countries, especially of sub-Saharan Africa. This is the consequence of a high prevalence of poorly managed prolonged obstructed labour[3], the leading cause of obstetric VVF in this and earlier studies[11,12].

This study reveals the persistence of a high incidence of Obstetrics VVF (82.5%) among the Hausa/Fulanis and the Kanuris, perhaps due to their common religious/traditional beliefs and practices that includes early marriages, teenage pregnancy, low-literacy level, Gishiri cut and poor socio-economic status.[2, 6, 9, 11, 12] Early marriage with subsequent teenage pregnancy is a common finding among VVF patients, but accounted for only 23.8% of cases in this study, showing a shift of preponderance from teenagers to older women who would have already attained their optimum pelvic size. Other factors may therefore be more important in the interplay of risk factors to developing VVF due to neglected prolonged obstructed labour. These include socio-cultural practices and religious hindrances that limit the woman's access to appropriate healthcare. In both tribes the husband's consent is paramount before access to any type of healthcare and home deliveries under the supervision of traditional birth attendants, who are often untrained, is common as seen in this study. Both cultures practice some degree of female circumcision, which may result in gynaetresia with subsequent obstructed labour. The gishiri/angurya cut on the anterior vaginal wall erroneously carried out with the hope of relieving the obstruction are well-documented aetiologic factors[11].

In addition, virtually all VVF patients are afflicted by a crunch of economic incapability due to their poor and uneducated background, into which they also marry and continue in the vicious circle of ignorance and poverty. Hence, they do not and cannot afford to access good obstetric services. Childhood malnutrition might have prevented adequate pelvic development, resulting in short stature women with small pelvis even after they have attained their maximum growth potential. These with the potential for large family sizes, would invariably give rise to the disease even among older patients thus shifting the epidemiology towards older women and no longer the hitherto reported teenager.

None of the patients belonged to the upper classes I and II as these are literate, economically well off and have unhindered access to efficient health care services.[10] Prolonged obstructed labour accounted for 85%, which is similar to findings in Sokoto 83.8%[13] and Ilorin 84.1%[6] in Nigeria, and slightly lower than the reported 92.7% and 93% in Benin (Nigeria) [14] and Republic of Gabon[15] respectively. These high incidences are a reflection of the poor obstetric care as obtain in many developing countries.[7]

The high incidence reported among primipara collaborates the findings of earlier reports.[2, 6,12,15-18] In this study though the highest age-specific prevalence rate occurred at 20-24 years, yet more than half (51.3%) of all the patients sustained the VVF as a sequelae of their first pregnancy. This is because though the primigravidae are mostly teenagers, [2, 6, 12, 15-18] older women with poor pelvic development[6] due to childhood ailments and malnutrition could also be afflicted in their first pregnancy.

The 75% success rate recorded after surgery falls within the range of 60-99% as success reported by other authors.[4, 6, 19, 20] The 18 unsuccessful repairs in the first and second attempts reflect very large fistulae and/or those who had earlier attempts by non-specialists. The 2 patients in the malignant group had no attempts at repair. Common complications encountered were secondary amenorrhea as earlier reported, which was probably as a result of upset in the endocrine regulation rather than failure of end organ receptivity.[21] Vaginal stenosis was observed in 20(31.3%) patients, results from healing by granulation and fibrosis. This produces scaring and contractures adversely affecting repair and future sexual activity.[2 2] The foot drop results from sustained pressure on the lumbosacral trunk especially the peroneal nerve by the impacted fetal head against the sacro-iliac joint

and also stretching of the sciatic nerve by hyperextension of the thigh or disc slip between the third and fourth lumbar vertebra. Divorce and separation/neglect are serious psychosocial calamities also reported earlier.[6] however this is contrary to finding in Jordan where patients are accepted because of strong family ties.[23]

CONCLUSION

Vesico-vaginal fistula remains one preventable medical/social calamity too many. Now afflicting not just teenagers and primipara, but predominantly older and more parous women. Public health education with the provision of accessible efficient intrapartum care is the cornerstone to eradicating this problem. This must also address educating and empowering the girl-child along with eradication of harmful traditional practices. Government, non-governmental organizations, traditional and religious leaders are key players in achieving this goal.

REFERENCES

1. Kelly J. Out reached programmed for obstetric fistula. Journal of Obstetrics and Gynaecology, 2004; vol. 24, (2) 117-118.

2. Ekewempu CC. Fistula. In; Text book of obstetric and Gynaecology for medical students A Agboola (ed) vol.1: Lagos university Educational services 1988; 46-59.

3. Waaldijk K, Armayau YD. The obstetric fistula: a major public health problem still unsolved. Int urogynaecol. J. 1993; 4: 126-128.

4. Inimgba MN, Okpani OAU, John CT. Vesico-vaginal fistula in Port-Harcourt, Nigeria. Trop J obstet Gynaecol, 1999; 16: 49-51.

5. Margolis T, Mercer L. Vesico-vaginal fistula. Obstet Gynaecol Surv. 1994; 49: 840-844.

6. Muneer-Deen AI, Abiodun PA and Zainab BBI. Epidemiology of vesico-vaginal fistula at the University of Ilorin Teaching Hospital.Ilorin, Nigeria. Trop J obstet Gynaecol 2002; 19(2): 101-103.

7. Lawson J. Vaginal fistula. Int J Gynaecol Obstet. 1993; 40: 13-17.

8. Ujah JA. Genital fistula: an experience in private practice. Nig. Med Pract. 1990; 18-19.

9. Aboyeji AP. Obstetric outcome of teenage primigravida in Ilorin. Nig med J. 1997; 33: 56-59.

10. Bond J. and Bond S. Social stratification sociology and healthcare. Second edition New York Churchill Livingstone. 1994; 37-63.

11. Harrison KA. Obstetric fistula: One social Calamity too many British Journal of)bstetrics and Gynaecology 1983; (90): 385-386.

12. Ampofo K, Olu T and Ilelebo G. Epidemiology of Vesico-vaginal in Northern Nigeria. W Afr J med. 1990; 9: 98-102.

13. Tahzib F. Epidemiological determinants of Vesico- vaginal fistula. British Journal of Obstetrics and Gynaecology 1983; (90): 387-391.

14. Gharoro VP, and Okwonkwo CA. Vesico-vaginal fistula: is there a shift in aetiological determinants? Book of abstracts 34th annual scientific Conferences of the Society of Gynaecology and Obstetrics of Nigeria (SOGON). 2000; 53.

15. Falaandryl L. Vesico-vaginal fistula. In Africa. 230 cases press. med. 1992; 21: 241-245.

16. Ekele BA, Duke AA. Urogenital fistula in Sokoto Trop J obstet Gynaecol. 1997; 14: 43-45.

17. Islam AL, Begun A. A Psychosocial study on Genito Urinary fistula. Bangladesh med Res council Bull. 1992; 18: 82-94.

18. Rizvi JH. Genital fistula- a continuing tragedy. J obstet Gynaecol Res. 1999; 25: 1-7.

19. Hilton P. Fistulae. In: Shaw R, Soutter W, Stanton S (eds) Gynaecology 2nd edition. Edinburgh. Churchill Livingston 1997; 779-801.

20. Hilton P Ward A. Epidemiological and Surgical aspects of urogenital fistulae: a review of 25 years experience in south-east Nigeria. Int. urogynaecol J pelvic Floor Dysfunction 1998; 9: 189-194.

21. Lawson JB. Injuries of the urinary tract. In. Obstetrics and Gynaecology in the tropics and developing countries (ed) Lawson JB and Stewart DB Adward Arnold (publishers) Ltd 1988; PP: 481-522.

22. Lawson JB. Sequelae of obstructed labour. In. Obstetrics and Gynaecology in the tropics and developing countries (ed) Lawson JB and Stewart DB Adward Arnold (publishers) Ltd 1988; PP: 203-218.

23. Amr MF. Vesico-vaginal fistula in Jordan. Eur J Obstet Gynaecol Reprod Biol. 1998; 201-203.