

Risk Factors and Surgical Outcome of Vesico Vaginal Fistula Patients in National Fistula Center in Dhaka Medical College Hospital

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Abstract

Introduction: Vesico vaginal fistula (VVF) is almost a preventable disease but most of the cases are incurable. VVF is very difficult to treat satisfactorily because it needs very sophisticated and delicate operation in the hands of specialized gynecologist in well-equipped hospital. More over treatment in Bangladesh is costly and time consuming, where 85% people are living in rural areas with minimum health care facilities. So, the objectives of the present study was to find the risk factors and surgical outcome of VVF patients in our context.

Methods: This study was carried out among 60 patients suffering from vesico vaginal fistula who were admitted in fistula unit of Dhaka Medical College Hospital. This was cross sectional observational study. Data were collected from the documents of each patients in VVF unit from January to April 2010.

Results: Study findings revealed that more than 93.32% of the cases belongs to the age group below 20 years and most of them were primi para. Almost all cases were illiterate, came from poor socioeconomic background and remote rural areas. 93.33% cases developed fistula due to prolong and obstructed labour, out of 60 cases about 46.66% cases were delivered at home by untrained dais. Majority cases were divorced or separated and due to this ailment living with their parent's. A large number of cases reported that their husband did not provide any expense. Patient's father and relatives rather than husband or father in law provide the expense of their treatment cost. In this study it was found that 53.33% is successful repair of VVF and 46.66% is failed repair of VVF and maximum cause is bad cases.

Conclusion: The high incidences of VVF are of obstetric origin in Bangladesh is due to inadequate maternity services, reliance on local untrained dais, early teenage marriage, lack of general as well as health education and transport facility. The solution lies in extending the preventive measures, providing surgical and other obstetric services at the upazila health complex and improving socio economic condition of the patients.

Keywords: Risk Factors, Surgical Outcome, Fistula

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I. Introduction

Bangladesh is a small ever green country situated in the north-eastern part of South Asia of 1,47,570 sq. km but have a very high population density approximately 948 / sq km. 40% people live below the poverty line and per capita income is 380 US\$ only. Maternal mortality is high, 320/100,00 live births and much more higher maternal morbidities (Adolescent pregnancy still one of the highest in the world with 135 births per 1000 women) Women get marry early (an average 15 years), 90% delivered at home, only 18% by skilled attendants, antenatal care is only 56%, awareness about childbirth complication is low, access to emergency health services

is limited [1]. The Vesico-Vaginal Fistula (V.V.F) is an injury that generally occurs in childbirth as a result of prolonged obstructed labour. The resultant prolonged pressure on the bladder may lead to a false passage between the bladder and the vagina, the child is stillborn and the woman is left childless, incontinence of urine. Vesico- Vaginal Fistula is still rank as one of the major Gynecological problems as well as social problems in Bangladesh. It represents, tip of an iceberg, an indicator of poor obstetric services, low socio-economic status and lack of education. In Bangladesh the population is 130.03 million of which 60.4 million (1) are women. Among these women only 40.6% has the opportunity of being educated. Among them 65% get married at the age of 15 to 19² Years and bear the undue heavy burden of children [2]. They are also ignorant about the importance of antenatal care and pregnancy. Those who received care tended to receive it from doctors (24%) or nurses, midwives and Family Welfare Visitors (10) %.Lack of education has created a great communication gap between them and qualified Doctors. They have faith on the traditional folk medicine and traditional birth attendants. Lack of education also leads to fear and superstition and pre-judices. Due to pre-judices and religious beliefs the pregnant women, their husband and their relatives in our country particularly in rural areas are reluctant to allow male physicians to attend delivery even though trained female attendance are rarely available. Poor socio economic condition is an important factor for these ailments. Average per capita income in our country is low. People are too much burned with poverty and cannot spend necessary money for obstetrical care. Besides these, the status of female population in our country is not encouraging. Women have a very little right to take their own decision. She is bound to obey her parent's or husband's or mother in law's decision. So if the women desire to consult with a doctor or come to hospital for confinement, she can't do so. Non availability of qualified and trained personnel is another important factor. There is only one doctor for 4043 population and one nurse for 15100 populations. Number of maternity center and hospital beds available for pregnant and natal mothers are very negligible in comparison to the demand The upazilla health complex, districts and city hospitals are out of reach of most the rural people. So, most of the patients in our country are not attended by qualified person during pregnancy or labour. Lack of transport facilities is another great bar in reaching the upazilla health center or districts hospital. Besides these, the upazilla health complex are not well equipped to deal with the complicated cases as there is no expert obstetrician, anesthetist and also arrangement for blood transfusion or other ancillary facilities. In Europe and North America, obstetric fistula existed 100 years ago, and has virtually disappeared, and it is usually a side effect of surgical treatment with radium and deep x- ray for malignancy in the pelvic region, sadly, obstetric fistula remains a devastating pregnancy related disability in many resource –constrained setting and treatable condition, so no women should suffer from this misery [3]. Direct causes of fistula include premature child bearing, limited access to obstetric care and malnutrition. Some of the indirect causes such as poverty, women's status in the society and lack of education prevent women from accessing services that could prevent the onset of such conditions. Prevalence is highest in impoverished communities in Africa and Asia..

II. Methods

This case control study was conducted among women suffering from Vesico-Vaginal Fistula where investigated using an administrated, semi-structured questionnaire. The study was conducted at national fistula center of Dhaka Medical College Hospital. This unit was included for this study was due to only Hospital with separate V.V.F unit. The study was conducted from January 2010 to April 2010. This time included the time for planning the study, data collection, analysis and report writing. All the women suffering from Vesico-Vaginal Fistula who were admitted in National Fistula Centre in DMCH for operation from January 2010 to April 2010 were cases and women came for post natal checkup in outdoor of DMCH were selected as control. Total respondents were 120 and among them 60 cases and 60 controls and purposive sampling technique was applied for collection of samples. Only the VVF patients are included in this study and VVF with RVF were not included, VVF with ureterovaginal fistula were not included. After taking informed verbal consent from the patient, the necessary information was collected in a preformed sheet by interviewing the patient and also from hospital records. Data analysis was done by SPSS 17. The proposal of dissertation was approved by the head of the department of gynae and obstetrics of Dhaka Medical College Hospital. Informed verbal consent was taken from every patient after providing a clear statement of the purpose of the study.

III. Results

Table 1: Distribution of respondents by their age. (n=120)

Age of respondents(year)	No of cases	Percentage %	No of controls	Percentage %
15-19	4	6.66%	18	30.00%
20-25	4	6.66%	24	40.00%
26-30	18	30.00%	12	20.00%

31-35	12	20.00%	6	10.00%
36-40	6	10.00%		
40 and above	16	26.66%		
Total	60		60	

Chi=23.59 and p=0.00. This table shows that most cases developing VVF are from 26 to 30 yrs age group.

Table 2: Distribution of respondents by mode of delivery. (n=120)

Mode of delivery	No of cases	Percentage %	No of controls	Percentage %
Vaginal	40	66.66%	38	63.33%
Assisted vaginal Delivery	6	10.00%	0	0
Caesarean	10	16.66%	22	36.66%
Hysterectomy	4	6.66%	0	0
Total	60		60	

Chi=35.67 and p=0.00. This table shows that most cases developing VVF has undergone vaginal delivery.

Table 3: Distribution of respondents by the person who conducted the delivery.(n=120)

Person who conducted delivery	No of cases	Percentage %	No of controls	Percentage %
TBA	28	46.66%	24	40.00%
Relatives	0	0.00%	0	0
Mother	0	0	0	0
Mother in law	0	0	0	0
Doctor	18	30.00%	36	60.00%
Nurse	6	10.00%	0	0
Tried by others then delivered by doctors	8	13.33%	0	0
Total	60		60	

Chi=54 and p=0.00

Table 4: Distribution of respondents by cause of fistula. (n=60)

Cause of fistula	No of cases	Percentage %
Obstructed labour	56	93.33%
Traumatic	4	6.66%
Clinical burn	0	0
Radiation	0	0
Criminal abortion	0	0
Combined	0	0
Total	60	

Table 5: Distribution of respondents by the result of operation. . (n=60)

Result of operation	No of cases	Percentage %
Successful	32	53.33%
Stress incontinence	0	0.00%
Failed operations	28	46.66%
Total	60	

Above table shows that more percentage (53.33%) of respondents had been successfully operated.

Table 6: Distribution of respondents by the reason for failure of operation

Reason for failure	No of cases	Percentage %
Bad cases	16	57.14%
Postoperative mismanagement	0	
Postoperative complications	0	
Catheter problem	0	
Faulty technique of operations	0	
Others	12	42.85%
Total	28	

Above table shows that, the reason for failure of operation was mostly due to bad cases (57.14%)

Table 7: Association of age of respondents with presence of V.V.F

Suffering from VVF	Age of the respondent					
	15 – 20	21 - 25	26 -30	31 -35	36 –40	40 to above age
Cases	4 (3.3%)	4(3.3%)	20(16.7%)	12(10.0%)	4 (3.3%)	16 (13.3%)
Controls	18 (15.0%)	24(20.0%)	12(10.0%)	6(5.0%)	0(0%)	0(0%)

Chi= 23.59 and P =0

So there is significant association between the age of respondents and V.V.F

Table 8: Association of parity with the presence of V.V.F

Suffering from VVF	Parity		
	Primi para	Multi para	Grand multipara
Cases	18(30.0%)	36(60.0%)	6(10.0%)
Controls	44(73.3%)	16(26.7%)	0(0%)

Chi= 12.30 and p-value is 0.002 which means that, there is an association between parity and VVF of women.

Table 9: Association of the mode of delivery with the presence of V.V.F.

Suffering from VVF	Mode of delivery		
	Vaginal	Assisted vaginal	Caesarian
Cases	56(93.3%)	4(6.7%)	0(0%)
Controls	10(17.9%)	8(14.3%)	42(67.9%)

Chi= 35.67 and p-value 0 shows significant association between mode of delivery and VVF of women.

Table 10: Association of place of delivery with the presence of V.V.F

Suffering from VVF	Place of Delivery	
	Home	Institutional
Cases	56(93.3%)	4(6.7%)
Controls	8(13.3%)	52(86.7%)

Chi =38.64 and P value is 0.It has a strong association between place of delivery at birth and VVF.

Table 11: Association of the presence of V.V.F with the person who has conducted the delivery

Suffering from VVF	Person who conducted delivery			
	TBA	Relatives	Doctor	Dai
Cases	4(6.7%)	12(20.0%)	0(0%)	44(73.3%)
Controls	12(20.0%)	0(0%)	48(80.0%)	0(0%)

Chi-square is 54 and p-value (0). So there is significant association between person who conducted delivery at birth and VVF of women.

Table 12: Association of duration of labour with the presence of V.V.F

Suffering from VVF	Duration of labour		
	1 day	2 days	More than 3 days
Cases	12(20.0%)	24(40.0%)	24(40.0%)
Controls	56(93.3%)	4(6.7%)	0(0%)

Chi-square is 33.38 and p-value(0). So there is highly association between duration of labour of women and VVF and the value of

IV. Discussion

This study revealed that 96.66% of VVF cases were obstetric in origin and 3.33% was due to traumatic cause. All patients has typical history of prolonged obstructed labour among which majority were inefficiently managed. When compared to a study stated that 95% patient was admitted in Dhaka Medical college hospital during the year 1981-1985 was due to prolong obstructed labour and 2.5% due to after abdominal hysterectomy[2]. Hilton stated that V.V.F was a major public health problem in developing country and 80% of them was due to neglected obstructed labour[4]. Tahzib also reported that patient with V.V.F were operated on in Ahmadu Bello University Hospital in Northern Nigeria from 1969-1980 among them.83% cases of V.V.F due to prolong obstructed labour., Aldo Campann(2003) stated that the principal cause of V.V.F in developing countries due to obstructed labour and obstetric intervention performed in that Context (Eg-symphiotomy, forceps delivery) [5].

Begum. et al.[6] reported that in the developing countries, more than 85% fistula are of obstetric origin whereas surgery or irradiation or both accounts for 95% of fistula in USA. Among 60 cases 43.33% deliveries at home by traditional birth attendance and 13.33 by other persons. These people has little or no knowledge about proper method of conducting delivery or complication of prolonged obstructed labour. As consequences the maternal injuries are very common. Only 16.66% were delivered by caesarian section by trained obstetrician after 36-72 hours of prolonged labour. Kabir et al [3] reported that traditional birth attendants attend 70-75% of all deliveries in Nigeria. On analysis of reasons for not attending the hospital found that 10% were not attended hospital due to financial problem, 10% not attend hospital because they can't took any decision, 56% patients had not gone to hospital due to traditional belief,13.33% had no idea about hospital . 23.33% were not go to hospital due to husband and mother in law disagree and 73.33% were not go to hospital due to others members in family never go to hospital. These mean that women of low socio-economic group have no right to take their own decision. Majority (60%) of the patients were young, ranging of ages between 26 to 30 years. As mean ages of patients were 25 but most of them were between 26-30 years. Among them 30% cases developed fistula in their first pregnancy and 60% patients were multiparous. Similar findings were found by Islam. F, [7] Begum R. A, [6] Begum. A[8] Classic study from Nigeria shown that, patients developing fistula after obstructed labour in the under developed countries are usually of younger age.

This study also stated that in under developed countries the mean age of patients was 24.7 years, resulting from early marriage. Hafiz reported the mean age of the patients was 34.58± 6.3 years range (25-45) years. Tahzib stated that women over 30 years had a greater incidence of V.V.F alone, Rather than fistula with tear or RVF. Kelly. J also stated that prevalence of V.V.F is highest among young primi gravidae. He also stated that the women were of average age 22.4 years with the range of 9-45 years. Kabir et al [3] stated that the age of acquisition of the disease could generally be said to be in the early teenage period. Info reports (2005) [9] reported that adolescent women are particularly susceptible to obstructed labour which ultimately produce V.V.F. It also reported that obstetric fistula can occur at any age during the child bearing years, adolescent women are at particular risk, especially when early marriage is common. Among 30 cases 16% of the patients had been divorced as a direct result of this ailments and 10% cases were separated without divorce and stay in their parents' house and own house. When compared to the study with Dannis. A. I (1984) stated that about half of the V.V.F patients studied by Murphy [10] were divorced and greater percentage of the remaining half were separated. Kelly. J stated that more that 20% of the women were rejected by their husbands after the fistula developed, leaving them without means.

Kikelome. B stated that the most traumatic aspects of V.V.F from the social point of views are the *resulting* incontinence, childlessness which may lead to marital breakdown eventually divorce. Info reports(2005) [9] reported that many fistula patients are abandoned or divorced by their husbands, particularly when it becomes clear that the fistula will not go away. 71% of patients were divorced or separated from their husband in a recent study of 899 fistula cases at the Evengel hospital in Jos, Nigeria. In India and Pakistan some

70% to 90% of patients studied in the 1980 have been abandoned or divorced. Wall. L [11] stated that the existing data suggest that large numbers of fistula patients become divorced or separated from their husbands, particularly when it becomes evident that their condition is chronic rather than transient. Bangladesh is very much like that of Ethiopia, here they are also illiterate and have a subordinate position amongst the men who delicate the society. The most miserable effect is due to religious Pardah system due to which most of the women are confined to the remotest corner of the house and live in a secluded life. The availability and accessibility of appropriate medical services no doubt play an important role in reducing these conditions. A number of biological social and environmental factors contribute to the high prevalence of these conditions in this country. These conditions are almost all preventable. About the surgery of VVF Michael K stated in his article that, hospital and office charts of patients who underwent VVF repair from February 1998 to December 2002. Pre-operative demographics and fistula characteristics are gathered. Intra operative data included-use of tissue flaps, blood loss and anaesthetics type. Post-operative review included time to discharge, successful repair and post-operative urinary and sexual dysfunction. 40 fistula repairs were identified. 93% occurred after a hysterectomy and no subjects had a history of radiation. 42 % failed at least 1 surgical repair of their fistula and 12% have failed 2 or more attempted repairs. 20% of the fistula measured 1 centimeter or more in diameter and the remaining 80% were 5 millimeter or less. Peritoneal flaps and Martius flaps were performed in 32% and 5% respectively. Post-operatively 100% of subjects were evaluated at 3 weeks when the suprapubic catheter was removed and 93% were evaluated at 3 months or later. All subjects were cured of their fistula at last contact. At 3 months post-operatively 94% denied any urinary dysfunction and 85% had resumed sexual intercourse. In ECWA Evangel VVF center Nigeria, from August 1998 to April 2004, 1084 fistula repair operations were performed on 926 patients. A vaginal approach was used in 90.1% of cases and post-surgical continence was achieved in 70.5% of patients. Continence was more likely in patients with an intact urethra, an upper or mid vaginal fistula and less fibrosis than in those patients who remained wet. The conclusion was, two thirds of patients with obstetric fistulas can be cured with complete restoration of continence and low surgical morbidity using a transvaginal surgical approach.

Limitations of the study

The cases were mostly came from rural area and the controls were from urban area. So their association with occurrence of V.V.F may not be appropriate.

V. Conclusion

This study of vesico- vaginal fistulae reveals that this condition is not only a problem for the patient, family member and the society but also of the major and difficult problems for the treating Gynaecologist. Though in developed countries vesico-vaginal fistula result from various gynaecological surgery but still in developing countries where maternity services are poor and people are less educated obstetrical cause is predominant. Other important factors related to this condition include, early marriage, child birth at a younger age, poverty, low socio-economic condition religious and socio-cultural beliefs, etc. So the maternity service for the women especially for those who live in the low socio economic condition should be improved including proper counselling and referral system.

VI. Recommendations

As vesico-vaajnal fistula is almost a preventable disease, the main effort at National as well as community level should be directed towards preventing the disease, for this purpose the author likes to put forward some of the suggestions based on the finding of the present study for the prevention of vesico-vaginal fistula in Bangladesh.

1. In this study it was found that majority of the women were married at an early age and developed V.V.F. due to complications of difficult child birth, this fact indicates the need of discouraging early marriages and early child birth.
2. Low socioeconomic condition, illiteracy, lack of awareness about the importance of ANC and pregnancy complication makes our mother more vulnerable to develop fistula or other life long suffering. So proper ANC should be ensured both from the side of clients and service providers. Expectant mother should be counsel properly and make them aware about the pregnancy complications.
3. At the grass root level the traditional birth attendants and Family welfare visitors who provide about 90-95% of maternity services of the rural people must be trained in such a way that they are able to screen the high risk cases and arrange for them skilled care or advise them for early reporting to a hospital.
4. Doctors posted in rural areas should have adequate training in obstetric practices. Specialized obstetrical and gynaecological service should be available at the upazilla health complexes.

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