

Socio-demographic Characteristics of Vesico-vaginal fistula (VVF) patients attended at a tertiary Care Hospital in Bangladesh

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Abstract

Background: Vesico-vaginal fistula can occur in different women with varied socio-economic condition. **Objectives:** The purpose of the present study was to see the socio-demographic characteristics of vesico-vaginal fistula (VVF) patients attended at a tertiary care hospital in Bangladesh. **Methodology:** This cross-sectional study was carried out from July 2013 to December 2013 for a period of 6 months in the National Fistula Centre in the Department of Obstetrics & Gynaecology at Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh. All patients who underwent surgical repair for iatrogenic VVF in National Fistula Centre of the department of Obstetrics and Gynaecology of Dhaka Medical College Hospital were included in this study. Patients who got themselves admitted to Obstetrics & Gynaecology department of DMCH with the complaints of fistula. The entire selected patients were interviewed for detailed socio-demographic characteristics. **Result:** A total number of 51 cases of VVF were recruited for this study. The mean age was 46.02 (\pm SD 6.104) years. Most of the respondents were illiterate (55.0%) and one-third patients had primary level education. The number of highly educated patients was scarce (12.0%). It was evident that average age at marriage of the patients was 15.8(\pm 4.74) years. Some females were forced to accept marriage at the age of 10 years. The mean interval between initiation of menstruation and the marriage was only 4.72 years. Mothers were on an average 17.48 years old at the time of first delivery. **Conclusion:** In conclusion middle age illiterate women are most commonly suffering from VVF. [*Journal of National Institute of Neurosciences Bangladesh, July 2020;6(2): 114-117*]

Keywords: Socio-demographic Characteristics; Vesico-vaginal fistula; VVF

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Introduction

Vesico-vaginal fistula (VVF) is an abnormal communication between the urinary bladder and vagina resulting in an uncontrollable, involuntary leakage of urine in vagina¹. This complication has been recognized since ancient times, being noted in the Egyptian mummy dating back to 2000 BC². It is still a common problem in the developing world, as 84 to 97% of cases occur in

these countries³. True incidence of VVF is not known because many women do not seek medical advice for this complication and remain unreported. VVF may be congenital or acquired.

The etiology of acquired VVF may be iatrogenic, post radiation and related to malignancy. In developed countries, 90.0% of VVF are caused by gynaecological procedures⁴⁻⁵. The iatrogenic fistulas caused by surgeries

are seen most commonly in transabdominal and transvaginal hysterectomies and comprise 75% of fistulas⁶. Fistulas could also occur due to urological and gastrointestinal surgeries, illegal abortions, and in Lower Segment Caesarean Section (LSCS)⁷ destructive operation like craniotomy. An overall incidence of 0.33% urinary tract injury has been reported in all pelvic surgeries⁸. This constant dribbling of urine due to VVF has a profound effect not only on the physical health of the woman; it also causes immense psychosocial problems in her life⁹.

Clinical presentations of VVF is straightforward. The woman gives history of continuous day and night leakage of urine per vagina and normal voiding does not occur. In case of ureterovaginal fistula, leakage of urine per vagina and normal act of voiding occur simultaneously. This difference is of great clinical importance for differentiation between vesicovaginal fistula and ureterovaginal fistula¹⁰. Uncontrolled leakage of urine into the vagina with unpleasant odour, excoriation of vulva and discomfort causes serious social, mental and physical problems for the women¹¹. Robertson gave an emphatic account of the social and hygiene problems faced by the victims¹². This present study was undertaken to see the socio-demographic characteristics of vesico-vaginal fistula (VVF) patients attended at a tertiary care hospital in Bangladesh.

Methodology

This present study was designed as descriptive cross-sectional study. This study was carried out from July 2013 to December 2013 for a period of 6 months. The study place was National Fistula Centre in the Department of Obstetrics & Gynaecology at Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh. All patients who underwent surgical repair for iatrogenic VVF in National Fistula Centre of the department of Obstetrics and Gynaecology of Dhaka Medical College Hospital were included in this study. Patients who got themselves admitted to Obstetrics & Gynaecology department of DMCH with the complaints of fistula. Women with stress incontinence and rectovaginal fistula, patients with severe co-morbidity or those patients who were unwilling to cooperate. Purposive non-probability sampling technique was used. A semi structured questionnaire was prepared after pre-testing containing patient profile. This was used for collection of information by interviewing and examining patients & their reports. Data were collected for six months. An interview usually lasted for an hour. The entire selected patients were interviewed for

detailed history. Thorough physical examination was done & relevant lab investigations were arranged. Prior to the commencement of the study, the protocol was approved by the local research approval committee. Ethical clearance was obtained from ethical committee existent in DMCH. The aims and objectives of the study was explained to respondents and then informed & verbal consent was taken from each subject. They were assured that all information and records would be kept confidential and be used for research purpose only. All the data were checked and edited after collection. Data were then entered into computer, with the help of SPSS for Windows (IBM SPSS Statistics for Windows, version 19.0, Armonk, NY, IBM Corp.) An analysis plan was developed keeping in view with the objectives of the study.

Results

A total number of 51 cases of VVF were recruited for this study who were fulfilled the inclusion and exclusion criteria. The leading age group was 41 to 50 years (70.6%). The second leading age group was 51 to 60 years with more than 15.0% patients. About 12.0% patients were relatively younger (≤ 40 years). The age range was 38-70 years. The mean age was 46.02 (\pm SD 6.104) years (Table 1).

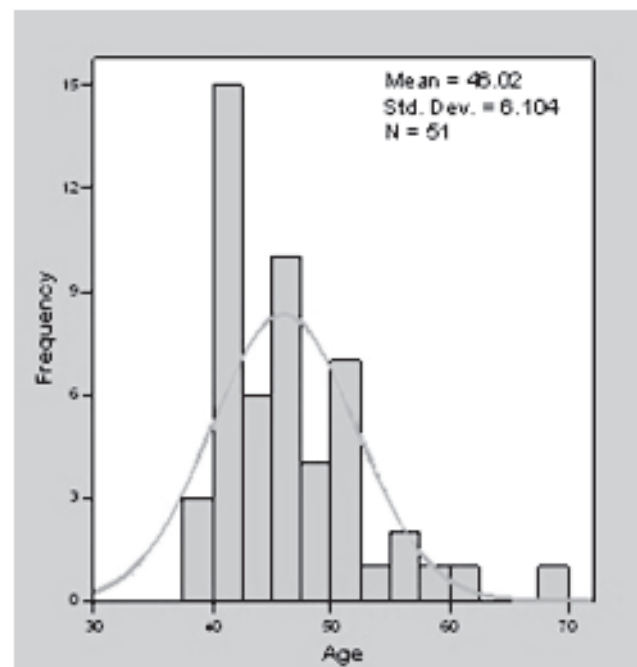


Figure I: Histogram showing Age Distribution of the Patients

The age range was 38 to 70 years. The mean age was 46.02 (\pm SD 6.104) years. The age distribution almost

followed a normal curve (Figure I).

Table 1: Distribution of the patients by age group

Age group	Frequency	Percent
≤40 Years	6	11.7
41 to 50 Years	36	70.6
51 to 60 Years	8	15.7
>60 Years	1	2.0
Total	51	100.0

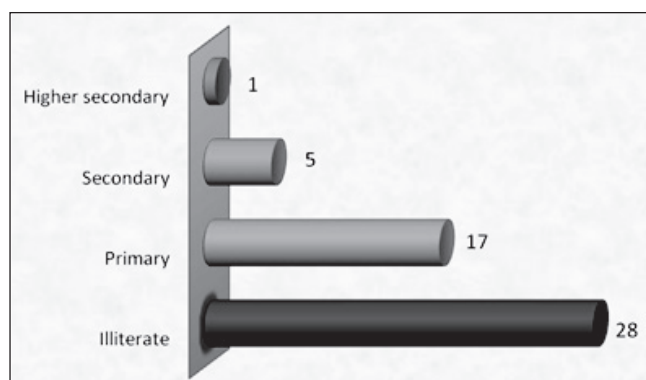


Figure II: Distribution of the patients by educational level

Most of the respondents were illiterate (55.0%) and one-third patients had primary level education. The number of highly educated patients was scarce (12.0%) (Figure II).

Table 2: Important continuous variables showing minimum value, maximum value, mean and SD

Variables	Min.	Max.	Mean	SD
Age at marriage	10	30	15.80	4.737
Duration of marriage (yrs)	1	57	20.40	12.536
Interval between menarche and marriage(yrs)	1	27	4.72	4.824
Age at first delivery	1	34	17.48	4.636
Height (cm)	131	155	146.37	5.593
Weight (kg)	30	78	48.37	10.074
Duration of urinary incontinence (months)	1	25	4.94	4.459

SD= Standard Deviation

It was evident that average age at marriage of the patients was 15.8(±4.74) years. Some females were forced to accept marriage at the age of 10 years. The mean interval between initiation of menstruation and the marriage was only 4.72 years. Mothers were on an average 17.48 years old at the time of first delivery. The average duration of urinary incontinence was

almost 5 years (Table 2).

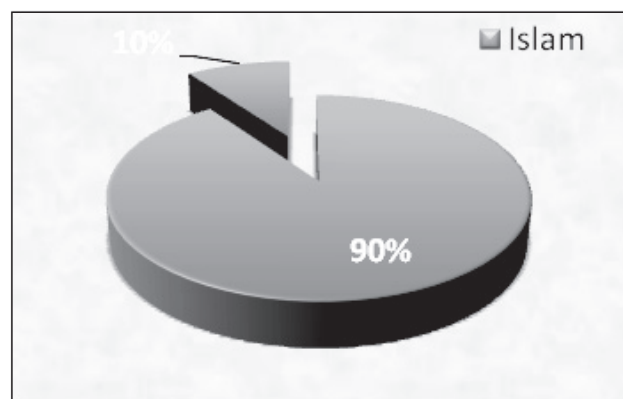


Figure III: Distribution of the patients by religion (n=51)

Most of the respondents were Muslim (90%) and the rest 10% patients were Hindu (Figure III).

Discussion

The VVF is the most common among the genitourinary fistulae and 90% of iatrogenic vesicovaginal fistulae are caused by gynecological procedures¹³. Hysterectomy, both by transabdominal and transvaginal approaches, is the most common procedure, comprising 75% of iatrogenic fistulae¹⁰. Globally, the overall incidence varies between 0.5 and 1.5%, and bladder injuries are more common than ureteric ones¹⁴. In pelvic surgery the development risk of VVF is 0.22% in laparoscopic hysterectomy, 0.1% in abdominal hysterectomy and 0.02% in vaginal hysterectomy¹⁵. They emerge as a complication of gynecological surgery. The main symptom of VVF is leakage of urine from the vagina, apparent only when the bladder is full, or constantly in the presence of a large fistula. After gynecological surgery, leakage usually appears after removal of the urinary catheter¹⁶.

VVF can be treated with surgery or conservatively and the timing of repair remains controversial. According to the literature, it is apparent that there is no consensus as to the definition of late (2 to 4 months) and early (1 to 3 months) repair¹². Conservative approaches such as catheter drainage, occlusion with fibrin, peeling of the tract epithelium with metal screw and steroid use have been reported in the literature for closure of small fistulas and outcome varies¹⁶.

In the current study a total of 51 cases were analyzed in the study. The mean age was 46.02 (±SD 6.104) years. Most of the respondents were illiterate (55%) and one-third patients had primary level education. This socio-demographic scenario is almost identical to other study in developing countries^{7,13}. One study in Turkey

reported the mean patient age as 43(\pm SD 3.86) years¹⁴. The alarming part is that majority of the cases occurred in middle age group and if not treated these women would have to spend a long part of their lives with this affliction, creating social and psychological problems in addition to medical issues.

Average age at marriage of the patients was only 15.8 (\pm 4.74) years. In many cases, early marriage means long sexual life and giving birth to more children. It may contribute in the development uterine pathology. As a result, hysterectomy may be needed, eventually increasing the odds of having an iatrogenic VVF. Though, no direct evidence is yet available in this regard.

The average duration of urinary incontinence was almost 5 months. This makes sense as VVF developed as a consequence of a surgery both the parties remain conscious about the repair of the wound. One Pakistani study reported the average duration of urinary incontinence as 3 months¹⁶. In 86% cases (44/51) vaginal delivery was conducted. In 8% (4/41) cases assisted vaginal delivery was done. Only 6% (3/51) patients underwent caesarean section operation. The above findings are quite comparable with some international studies especially done in Pakistan^{10,13}.

Conclusion

In conclusion middle age women are the most common age group who are suffering from VVF. Furthermore, majority women are illiterate women. However, young age mother are most commonly suffering from VVF. It is necessary to perform a large scale multicenter study.

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