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The teenage pregnancy on obstetric fistula among women in fistula center at Malalai Hospital, Kabul Afghanistan: A cross-sectional study

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Abstract. Introduction: Obstetric Fistula is defined as direct communication between the vagina and the bladder (vesicovaginal fistula) and/or between the vagina and the rectum (recto-vaginal fistula). Each year 50.000 to 100.000 new cases of obstetric fistula are globally reported. According to World Health Organization, more than 200 million young women live with unrepair obstetric fistula mostly in sub-Saharan Africa and southeast Asia including Afghanistan. Women with obstetric fistula suffer from frequent urinary or fecal incontinences which causes shame, social segregation and other health problems. Obstructed labor (due to early marriage and inadequately developed pelvic) constitutes the most common cause of obstetric fistula. Therefore, the current study strived to assess teenage pregnancy on obstetric fistula among women in the fistula center of Malalai Maternity Hospital in Kabul, Afghanistan. **Methods:** A descriptive cross-sectional study was conducted over a period of one year (2019-2020) with 30 cases of obstetric fistula among women attended at Fistula Center of Malalai Maternity Hospital. **Result:** Among 30 women current aged with obstetric fistula 66.6 % were between 20-37 years, the mean age was 33.9 ± 10.2 and the median was 30 years, the max and min range was between 20-56y. 66.6 % cases their marriage-age was between 16-20 y, while marriage age (mean) was 18.4 ± 3.2 , most women (60%) their ages in first delivery were between 15-19 y old, the height of the 40% women was less than 150 cm, and 46.7% women had 1-4 parity with mean of 5.2 ± 3.1 and extreme (1-14), duration of labor in 90% were more than one day, majority of cases (60%) was Recto vaginal, 33% vesicovaginal and 7% with a compound type of fistula, 80% of cases were from remote and rural areas. **Conclusions** The teenage pregnancy and early marriage between (16-20 y old) was the vast majority of obstetric fistula formation, rectovaginal fistula, living in a remote area, short stature less than 150cm, and duration of more than one day have been seen. teenage pregnancy and obstetric fistula are preventable conditions. These findings suggest that efforts to reduce obstetrical fistula should target teenagers

Keywords. Fistula, Obstetric, Pregnancy, Teenage, Obstructed labor

Introduction

Obstetric Fistula is defined as direct communication between the vagina and the bladder (vesicovaginal fistula) and/or between the vagina and the rectum (recto-vaginal fistula). The highest incidence of obstetric fistula is reported from underdeveloped and developing countries.

This could be arising from early marriage, inadequately developed pelvic of young girls and women, lack of prenatal and obstetric care (due to poverty and living in remote areas). Lack of sufficient care for needy women may be due to low supply of healthcare facilities and pregnancy related complications in young girls and adolescence in countries with high incidence of mortality. ^[1-3].

Each year more than 50.000 new cases of obstetric fistula are globally reported. According to World Health Organization, more than 200 million young women live with unrepair obstetric fistula mostly in sub-Saharan Africa (1.62 per 1000 women of reproductive age in Ethiopia) and southeast Asia (2.6 per 1000 women of reproductive age in India) including Afghanistan ^[4]. Between 50 and 80% of women under the age of 20 in poor countries develop obstetric fistulae (the youngest patients are 12–13 years old) ^[2-5]. Studies have shown that obstructed labor remains a leading cause of maternal death and disability. Countries with a high incidence of maternal mortality have a high rate of obstetric fistula for similar reasons ^[2, 3, 6].

Obstetric fistula around the world is closely related to many known risk factors of obstetric labor, including lack of access to emergency obstetrical care, early age of marriage, teenage pregnancy, malnutrition, poverty, lack of access to family planning, antenatal care, and lack of access to formal education for girls ^[1, 5, 7].

In developed countries, many women with Obstetric fistula suffer from recto-vaginal fistula (RVF) which is caused by episiotomy and forceps/vacuum extraction of the baby from the vagina. In Niger, 80 percent of fistula cases were among girls aged between 13—17 years. Young girls and women (aged 10 to 19) suffer disproportionately from fistula. Although more women aged 20 to 45 give birth than women in the age group 10 to 19, close to 50% of all fistula cases occur in women aged 10 to 19 ^[3, 4, 8-10]. Nevertheless, obstetric fistula affects many women in low-income countries including Afghanistan.

In this study, we have assessed teenage pregnancy on obstetric fistula among women who admitted to the fistula center at Malalai hospital. This is important as it will help to identify women at risk for each type of fistula and plan prevention strategies. Finally, it will draw the attention of health care providers to their responsibility in the prevention of obstetric fistula. Understanding the teenage pregnancy on obstetric fistulae enables to develop prevention appropriate plan for each patient and teenager.

Aims: To assess teenage pregnancy on obstetric fistula. among women at the fistula center of Malalai maternity hospital, Kabul Afghanistan.

Materials and methods

A descriptive cross-sectional study was carried out on women attending at fistula center of Malalai maternity hospital in Kabul from January 2019- January 2020. We employed convenience sampling during this period on 30 eligible women with obstetric fistula. To confirm clinical diagnosis, all patients with obstetric fistula included in this study went through pelvic and vaginal examinations. After intensive reviews, essential information regarding age, parity, type of fistula, marriage-age, age at first delivery, height, duration of labor and living place, were retrieved from patient's profiles who were diagnosed and admitted for obstetric fistula during this period from OPD (outpatient department), operation room medical records, and the electronic database. Women delivered outside the hospital who were referred for repairing obstetric fistula were also included in the study. However, patients without obstetric fistula, congenital fistula, pelvic fistula caused by malignancies and gynecologic surgery were excluded. The data was entered and analyzed using SPSS 20. Frequencies and percentages were calculated for variables. Mean and standard deviation were calculated for continuous variables.

Results

A total of 30 women with obstetric fistula were admitted during the period of study. The current mean age of the women was (33.9±10.2) years and ranged 20-56y old. Marriage-age average (mean) was (18.4±3.2) and their (Max-Min) was 11-25y. Most women (60%) their ages in first delivery were between 15-19 y old. Height of the 40% women were less than 150 cm. The mean parity was (5.2±3.1), with extreme 1-14. Duration of labour in 90% of women were more than one day. 80% of cases were from remote town and rural areas. 60% of obstetric fistula were rectovaginal, 33 % vesicovaginal and 7% were compound type.

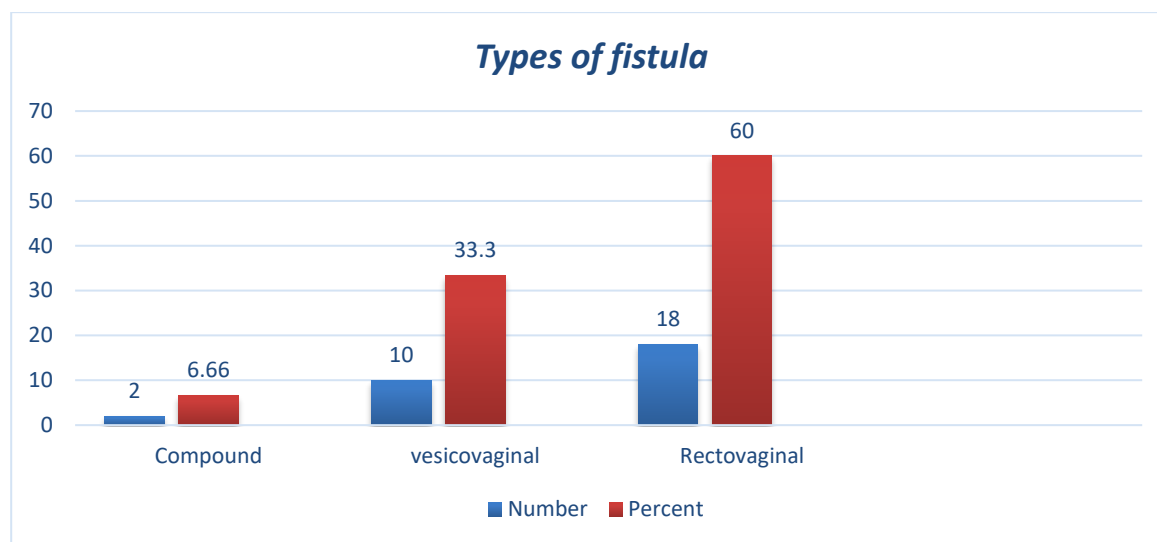


Figure 1: represent the type of fistula. Out of 30 patients of obstetric fistula, 60% of women diagnosed as rectovaginal type, 33% of patients as vesicovaginal and 7% of patients had both types (compound fistula).

Table 1: marriage age and living place of patients

Marriage age	n=30	(%)
11-15	7	23.3
16-20	20	66.6
21-25	3	10
Living place		
Remote area	24	80
Kabul (rural)	6	20
Total	30	100

Table 2: age and parity of women with obstetric fistula.

Women age variables	
Age	n (%)
20-28	10 (33.3)
29-37	10 (33.3)
38-46	7 (23.3)
47-55	2 (6.7)
>56	1 (3.3)
Number of parity	

1-4	14 (46.7)
5-8	12 (40)
9-12	3 (10)
>13	1 (3.3)

Table 3: *illustrated height and age of women at first delivery*

Height/cm	n (%)
Less than 150cm	12 (40)
150-155cm	11 (36.6)
More than 155cm	7 (23.3)
Age at first delivery	
Less than 15 y	5 (16.6)
15-19y	19 (63.3)
20-24	6 (20)
Total	30 (100)

Table 4: *Depicts the duration of labor*

Length of delivery	No	(%)
Less than one day	3	10
More than one day	27	90
Total	30	100

As mentioned in these tables, 66.6% of patients were at the age of (20- 37years). Out of 30 patients 46.7 % (n=14) had 1-4 parity, most women were between 1-4 parity. One patient had more than 13 deliveries.

Out of 30 patients with obstetric fistula 20 women (66.6%), their marriage-age was between 16-20y old, and 3.3 % were 11-15y. Reduction in rates of early marriage and teenage pregnancy can decrease fistula formation and reduce maternal morbidities and promote a healthy lifestyle for women and teenagers. 80% of patients are living in the remote and rural areas of the provinces of Afghanistan. This study results indicate that early marriage and childbearing were important characteristics of women with obstetric fistula.

Discussion

In general, among 30 patients with obstetric fistula, 33.3 % of patients were between 20-28 y old and 33.3 % were between 29-37 y old, and their current mean age was (33.9±10.2), with extreme (20-56 y). A study by Tayler-Smith, K showed that women with obstetric fistula their median age were 31 years IQR, 25–40y^[11]. Kpatcha et al reported the middle age of patients 40.7 y, with extremes (18 - 70 y)^[12]. M., Ouattara, A., Kirakoya D. reported the mean age of the patients at the time of diagnosis was, respectively, 37.8 ± 12.2 (min 19, max 70y)^[13, 14]. Among older women and the grand multipara, the reason for developing obstetric fistula could be prolonged labor due to abnormal presentation and fetal position with possible injury to the bladder and uterus but at a young age at first, delivery are predisposing factors to the development of fistula due to the undeveloped pelvis and obstructed labor^[3, 4]. Some discrepancies could be due to differences in measurements and time variants, access of health facilities services, time of admission for treatment, family barrier, economic issues. However, some findings of studies are similar to our findings.

According to our study, the marriage age of most women with obstetric fistula was 16-20 years old with a mean of 18.4 ± 3.2 with extreme (11- 25y). The study results indicate that early marriage and childbearing are important characteristics of women with fistula in Afghanistan.

A study by Holme reported Median age of obstetric fistula at marriage was 18y and at the development of fistula was 22 years^[15]. both studies are likely similar. According to Kabir, M most of the patients (81.6%) had their first marriage between the ages of 10 – 15 years. Experience from these studies suggests that teenage pregnancy is a key risk factor of obstructed labor and fistula formation More obstetric fistulae occur in areas where early marriage and pregnancy before pelvic maturity is attained common and where obstetric care is inaccessible as, Afghanistan, African, and South Asian. Young age and first delivery have been associated with the development of fistula in many studies^[4, 6]. All studies are similar in our finding.

In our study at the fistula center of Malalai Hospital 46.7% of women had 1-4 parity with a mean of 5.2 ± 3.13 and extreme of (1-14). Holme reported 49.0% of patients were primiparous, and 27.6% were parity four^[15]. Srichand, P., Hassan, had earlier concluded in their study that means parity was 3 ± 2.4 ^[16]. Lorencz, E reported 47.7 % women with obstetric fistula were primiparas and 52.3 % were multiparas^[17]. Kpatcha, P Wangala found out that multiparity has been a risk factor for obstetrical fistula^[12]. These findings by these studies are slightly similar.

In our study, the vast majority of women (90%) who develop obstetric fistula have been in labor for days or more than one day, often at a considerable distance from appropriate healthcare facilities. A study by Multa showed that 91.7 % of women who developed OF have been in labor for more than one day^[4]. It was closely similar to our finding.

In our study, 60% of women had recto-vaginal fistula, 33% vesico-vaginal, and 7% combined type. A study by Tayler-Smith et al showed that 87% of obstetric fistula were vesicovaginal type^[11]. Similar findings by Zheng, demonstrated that 86.5% of women had vesicovaginal type obstetric fistula^[18]. Browning, A. reported that women with combined vesicovaginal type fistula consisted 7.5%^[1, 19]. The vesicovaginal fistula was the most common type of obstetric fistula that was represented by these studies. Danso reported 3.1% of patients developed a rectovaginal fistula^[20]. These studies have differences with our finding because these studies are conducted in different societies with different culture, customs, access to health facilities and, the health provider and birth attendance skill. Champagne, B. J. demonstrated that in developed countries, the majority of women with obstetric fistula were rectovaginal fistula, this is caused by episiotomy and forceps/vacuum extraction of the baby from the vagina^[21]. Rijken, Y study showed that (7.6%) women had a combined urogenital and recto-vaginal fistula. 20 These studies are more likely to our finding.

In our study, 80 % of women with obstetric fistula lived in remote or rural areas the same as the finding of the study in Nigeria where 20.8% lived in urban and 72.2% lived in rural areas. Badshah, a study estimated an incidence of 1.239 per 1000 deliveries in rural regions. This was based on 2 fistulae found in the rural region elsewhere they refer to these regions as small towns^[3, 22]. In the study by Ouattara revealed the majority of patients (58%) of obstetric fistula were from rural areas^[13, 14]. Melah revealed that rural place of residence (95%) were also factors associated with acquiring the fistulae 16 it is similar to Saqib, study which demonstrated most of obstetric fistula cases (95%) were in rural areas^[23]. Ommer A Oakley Studies demonstrated that major risk factors for the development of a fistula included living in a rural residence^[7, 9]. That obstetric fistula more commonly comes from rural areas where there is a lack of obstetric services, and rarely from urban areas Fistulas occur in places where the use and access to obstetric care are limited. All the above-mentioned studies support our findings.

Our finding revealed that the age of 63.3 % of women at first delivery was between 15-19 years. In a study by Multa, Age at delivery less than 20 have been seen 29-34.6% which is different from our findings. It could be due to different culture and custom, lack of awareness about contraception, child spacing and maternal education.

Our study revealed the majority of women (40 %) their height was less than 150cm and had short stature. Tebeu, P.M reported that many of the fistula patients were shorter than 150 cm (40–79.4%) [24]. Experiences from studies suggest that teenage pregnancy is an important risk factor of obstructed labor and fistula Formation. These findings propose that efforts to reduce obstetrical fistula should target teenagers.

Conclusions

The teenage pregnancy and early marriage between (16-20 y old) was the vast majority of obstetric fistula formation. Rectovaginal fistula, living in a remote area, short stature (height less than 150 cm), and duration of more than one day have been seen. Teenage pregnancy and obstetric fistula are preventable conditions. These findings suggest that efforts to reduce obstetrical fistula should target teenagers.

Recommendation

- Putting off childbearing by delaying marriage will allow young women to complete their physical development.
- Influencing community values concerning the role of women in society to raise awareness about fistula and child spacing
- Improvement and expanding access to safe delivery, care facilities for obstetric complications and promoting safe motherhood.
- Providing different methods of contraception and health services.

Limitations

This was a descriptive study, further analytic researches are necessary to identify the factors associated with obstetric fistulas.

Strength

This study was conducted in the specialty center of the fistula which is supported by UNFPA. Malalai fistula center is one of the highly-equipped fistula centers in Afghanistan.

Authors contribution

All authors equally contributed. S.M drafted the manuscript and analyzing the data, O.S data collection & M.S translated the initial manuscript from Persian to English, intensively reviewed the manuscript and responded to reviewers' comments.

Conflict of interests

The authors declared that there is no conflict of interests as every authors take part voluntarily in this study.

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