



## **An Obstetric Fistula: A Prospective View**

**Supriya Patil, Manisha Laddad and Gauri Shinde**

Department of Obstetrics and Gynaecology, Krishna Vishwa Vidyapeeth "Deemed To Be University",  
Karad

### **ABSTRACT**

*Studies have found that OF is a serious labor complication with serious social and emotional ramifications for women. Additionally, studies have shown that it results in total incontinence and often leads to a life of seclusion and shame. Unfortunately, many studies have shown that women see this as a punishment for their acts, causing others to consider suicide. Studies have shown that the medical team should treat the OF sufferers' complicated physical and psychological demands. Furthermore, studies have concluded that OF may be treated in the majority of instances if the practitioner has the requisite training and surgical abilities. Thus, in our review, we were trying to discuss OF in terms of its signs and symptoms, prevalence, history, epidemiology and management.*

**Key words:** *OF, Signs, Symptoms, Prevalence, History, Women, Labor Complication, Epidemiology, Management.*

Received 28.09.2023

Revised 20.10.2023

Accepted 30.11. 2023

### **INTRODUCTION**

Research has indicated that an "obstetric fistula (OF) is a medical condition that arises when a hole forms in the birth canal due to childbirth".[1,2] Additional research has determined that "OF can occur between the vagina and rectum, ureter, or bladder".[1,3] In addition to this, studies have shown that it may lead to the involuntary release of urine or feces. [1] Furthermore, studies have revealed potential complications such as depression, infertility, and social isolation. [1] According to the findings of many studies, "risk factors include having an obstructed labor, having low access to medical care, being malnourished, and having a teenage pregnancy". [1,2] Studies have also shown that the fundamental cause is a decreased amount of blood flow to the region that's been afflicted for an extended period of time. [1] Additionally, studies have shown that the diagnosis is ordinarily derived from the patient's symptoms and may be bolstered by the use of methylene blue. [4] Thus, in our review, we were trying to discuss about OF.

### **HISTORY [5]**

Studies have shown that OF have been present since the earliest days of childbirth. However, studies have shown that it wasn't until relatively recently, around 350 years ago, that the first recorded case of successfully treating an OF occurred in Europe. Furthermore, studies have found that James Marion Sims, widely acknowledged as a pioneer in the field of gynecology, is credited with being the first surgeon to effectively treat fistula patients through the use of flap-splitting surgical techniques. These techniques were pioneered by Sims, who is widely recognized as the leading figure in the field of modern gynecology. His work dates back to the 19th century and primarily occurred in New York, a city that experienced a significant prevalence of obstetric fistulas during that era.[5]

### **PREVALENCE**

Numerous studies have demonstrated that OF have been almost eradicated in regions where women have fast access to safe and affordable emergency obstetric care, such as C-sections. Studies have found that this is a significant finding since obstetric fistulae were formerly quite common in these regions. Studies have shown that OF, on the other hand, may develop in any location where women lack access to healthcare.[5] Additionally, studies have found that no one is in a position to state with absolute clarity how many people are currently awaiting treatment for fistulas or how many new instances are being diagnosed each year.[5] In addition, studies have found that just 0.35 percent of births are predicted to take place in locations that do not have enough access to obstetric care that is both safe and affordable, according to a large study that was conducted in hospitals. [6] From this, we may calculate that between 50,000 and 100,000 women have OF each year and that there may be two million women living with this

illness across the globe. [7] According to a meta-analysis done in 2013, the prevalence is estimated to be 0.29 per 1000 women of reproductive age. [8] Numerous studies have uncovered variations across various geographic regions. Studies have concluded that countries with improved access to healthcare can expect to see a decrease in maternal mortality rates and a reduced occurrence of OF. Studies have found that there will be a significant number of victims of OF in countries with high maternal mortality rates, such as South Sudan. Furthermore, studies have concluded that the Ministry of Health of South Sudan has estimated that there are approximately 60,000 women currently suffering from OF in South Sudan alone.[5] Multiple studies have indicated that the sole factor contributing to OF is a prolonged and untreated OF.[9,10,11,12,13,14,15,16 ]. Additionally, studies have found that labor should ideally last for a shorter duration, preferably less than 24 hours.[5] Studies have shown that the duration of labor should be much less than one day.[5] When compared to a woman who has already given birth several times, the active phase of labor lasts an average of 12 hours.[5] On the other hand, studies have shown that women who acquire an obstetric fistula have typically been in labor for 3.9 days. [9]

### **SIGN & SYMPTOMS [4,17,18,19]**

1. Flatulence
2. Urinary incontinence
3. Fecal incontinence
4. Foul-smelling vaginal discharge
5. Repeated vaginal or urinary tract infections
6. Irritation or pain in the vagina or surrounding areas
7. Pain during sexual activity

### **OTHER SYMPTOMS**

In addition to these other consequences, according to many studies, involves the unfortunate occurrence of stillborn infants resulting from prolonged labor, which is observed in 85% to 100% of cases. [12] Studies have shown that severe ulcerations of the vaginal tract, along with "foot drop," a condition that results in paralysis of the lower limbs and makes walking impossible, have been observed. [7,13,14,15] Additionally, studies have shown that infection of the fistula can lead to the formation of an abscess, and a significant number of individuals may experience amenorrhea. According to a study [18], OF cause significant physical, social, economic, and psychological impacts on the women they affect. Additionally, studies have shown that as per the UNFPA, the unfortunate outcome of prolonged obstructed labor is the almost inevitable loss of the baby, and the parent is left with chronic incontinence. Furthermore, studies have shown that when individuals are unable to control the flow of urine, feces, or both, they may unfortunately face abandonment by their spouse and family, as well as being ostracized by their community. Additionally, studies revealed that without proper treatment, their chances of finding employment and maintaining a fulfilling family life are extremely limited.[19]

### **EPIDEMIOLOGY STUDIES**

Studies have found that the "most current, unpublished statistics on the national prevalence of fistula in Ethiopia estimate that there are 2.2 fistula patients for every 1000 women in the reproductive age range (15–49 years old)".[20] "These numbers are based on an analysis of data collected from rural areas. Studies have also concluded that this translates to around 26,000 separate times in which some kind of course adjustment is necessary".[20] Studies have also concluded that this is the "situation in spite of the fact that there are a significant number of obstacles associated with the collection of data on maternal mortality and morbidity in nations that are still in the process of developing".[20] Furthermore, studies have concluded that the results of the "Demographic Health Survey (DHS) that was conducted in Ethiopia in 2005 showed that the national prevalence of obstetric fistula was 1 percent of women who had ever been married".[20] In Northern Nigeria, studies have estimated that between 100,000 and one-half of the two million women who live with obstetric fistulas worldwide suffer from the affliction. It is estimated that over 70,000 individuals in Bangladesh are suffering from the sickness. [21]

Studies have found that OF makes it more challenging for women to give birth to healthy children, according to studies from Kenya and Nigeria that have shown this. [22,23] Studies have concluded that although it is "estimated that between 50,000 and 100,000 women will develop a fistula each year, other studies believe that this forecast is too low and argue that it should be higher. In Ethiopia, studies have shown that young peasant girls who are married off when they are still in their early teens and farmers who have little to no education are the typical people who suffer from fistula".[20] These young girls are often married off to farmers who have no education at all. Furthermore, studies have also concluded that the women do not provide the girls with a proper education, and the girls are coerced into doing tough

chores for the household. They have no access to any health services whatsoever throughout their pregnancies or labors, and they are often supported by other women in the village when they are giving birth.[20] However, studies have also concluded that after a number of days of labor, they deliver a stillborn baby. Studies have also concluded that, despite the fact that the majority of these young girls die during obstructed labor, those who do develop urogenital fistulas as a result of the condition. Additionally, studies have found that after giving birth, women quickly lose their husbands, the respect of their village acquaintances, and their social life. As a result, studies have also concluded that they often wish that they had died along with the child. There are several instances of people killing themselves all by themselves.[20]

Studies have found that, despite the fact that significant research that was conducted in communities is restricted, this description of fistula patients is supported by a number of studies that were conducted in hospitals. These studies provide evidence for this hypothesis. [22,23,24,25,26,27,28,29,30] Researchers conducted “in-depth interviews with 639 fistula patients who were treated at the AAFH between May 1999 and February 2000. The average age of the fistula patients when they came to the hospital was 22 years old, 14.7 years old at their first marriage, and 17.8 years old at the delivery that caused the fistula. These findings were based on the fact that the mean age of fistula patients when they presented to the hospital was 22 years old. These results show that when patients with fistulas presented to the hospital, the mean age was 22 years old”.[27] Thus, studies revealed in this context that the “duration of labor was an average of 3.8 days (the range was 1–10 days), and more than 83 percent of the mothers gave birth to their first child before the age of 20”.[20]

Several studies have found that, in the “developing world, protracted obstructed labor beyond the reach of obstetric help is the primary cause of obstetric fistulas”.[26,31,32,33,34,35,36] Studies have further concluded that patients with fistulas face a significant number of obstacles while attempting to get admission to a health care institution. This is largely caused by the enormous distances that must be traveled to reach treatment, poor transportation networks, a lack of cash, and the incorrect notion that labor and delivery may be managed manually at home.[24,27,18,30] According to the most recent statistics available from Ghana, difficult gynecological surgery and obstructed labor remain the predominant causes of fistula, accounting for 91.5 and 8.5 percent of cases, respectively. Furthermore, it is estimated from various studies that 53% of these women were under the age of 25, and 43% of them had a fistula within the first delivery years of their lives.[37] Other significant causes of urogenital fistulas include injuries sustained during difficult surgery, radiation treatment, sexual abuse, penetrating injuries (such as those sustained by a stick or horn linked to a cow), infections, and malignancies. Other causes of urogenital fistulas include penetrating injuries, such as those sustained by a stick or horn attached to a cow. Studies have shown that urogenital fistulas may also develop when a cow has a stick or horn linked to it. [31,38,39] Studies have also shown that it’s possible that poor nutrition and hard physical work during adolescence and early childhood can slow development and help explain why obstetric fistulas are so common in developing countries. Studies have found that traditional ice-cutting procedures that are harmful include gishiri ice-cutting, which is responsible for between 6 and 13 percent of all fistulas in northern Nigeria. [22,25,26,40] Studies also found that this is a “traditional method for treating a number of gynecological issues, such as irregular periods, infertility, genital prolapse, and labor bladder. It involves making a series of random cuts across the front of the vagina, enclosing the urethra and the bladder neck. Studies have also concluded that, despite the fact that fistulas are common in regions where various types of gishiri cutting are practiced, there is no data suggesting that gishiri ice is a significant cause of fistula development or even that it is directly associated with it”.[20]

Studies have found that in “addition to urinary and fecal incontinence and the death of their baby, women who go through obstructed labor are more likely to suffer bone abnormalities, perineal nerve injuries (including signs of a foot drop), nerve damage to the bladder, and dermatologic injuries. According to studies conducted by the AAFH, more than 93 percent of the babies delivered to women who live with fistulas were stillborn, and more than 50 percent of fistula patients were divorced”. [27,31,41]

## MANAGEMENT

Studies have found that conservative methods or surgical techniques may be used in the treatment of an obstetric fistula.[20] Studies also found that “putting an indwelling catheter in all mothers who have survived spontaneous labor can stop fistulas from forming. New fistulas can heal successfully in 60% of cases if the edges of the fistula come together and surgical drainage using a FC is used; however, the vast majority of cases will need to be managed”. [42,43]

Studies have found that every type of fistula is distinct, and there is no one surgical technique that can be utilized to seal all types of fistulas. When dealing with unexpected discoveries after surgery, both experience and expertise are necessary components. Studies have further concluded that the success of

fistula repair will also be impacted by factors such as the quality of nursing care received and the degree of damage sustained.[20] Furthermore, studies have also concluded that in “OF repair, there are some controversies regarding timing, approach, and antibiotic use; however, there are some generally accepted principles of fistula closure technique that include mobilization of the bladder from the vaginal wall, identification of the ureters, closure of the bladder wall, testing for integrity of closure by instilling dye (methylene blue) into the bladder, placing a graft between the bladder and the vagina, and closing the vaginal skin”.[44,45,46,47]

Studies have found that in situations in which there is a little scarred vagina, it may be essential to assume an exaggerated lithotomy posture in combination with a vaginal relaxing incision in order to gain sufficient exposure to the surgical field. Studies have further concluded that one of these techniques is used in cases where the vagina is thin and scarred. Studies have also concluded that spinal anesthesia is the type of anesthesia that is both the least expensive and the easiest to develop for use in poor nations. Studies have also shown that the success rates following fistula repair might vary anywhere from 85% to 92%, with the first procedure having the most potential for success.[38,48] Furthermore, researches have shown that if there is complete destruction of the urethra, a closed or scarred vagina, complete or practically complete destruction of the bladder, or involvement of the ureters, then the repair will be extremely difficult and the prognosis will be bad. In addition, there is a possibility that the ureters will be involved, and if the fistula is wide and high and is surrounded by severe scarring in the vagina, the ureteric orifices should be found and catheterized under direct vision in order for them to be easily visible after surgery. This will ensure that the fistula can be repaired successfully. The fistula may then be successfully healed as a result. The fistula may then be successfully repaired in the future.[20] Studies have found that this is done by separating the bladder from the vaginal wall, which results in a low bladder closure. The ureteric catheters may then be passed into the bladder and taken out via the urethra in order to keep them away from the operative region when this has been performed.[20]

Studies have found that after that, the bladder is closed using sutures that are interrupted and absorbable. However, this is not always possible, particularly in situations involving urethral fistulas and exceptionally large fistulas. In a perfect world, the bladder would be closed using a process that included two layers of tissue. If at all possible, the purpose of the second-layer stitch is to provide additional support for the first layer. Studies have also shown that the Martius graft is a technique that most surgeons utilize to maximize the probability of a successful fistula repair. In this procedure, the bulbocavernosus muscle is placed between the bladder and the vaginal sutures. [20] The end site of fistula repair has shown a significant improvement in recent years, despite the fact that there may be residual incontinence depending on the location of the repair and the amount and severity of tissue loss. Research has shown interest and concluded that urinary diversion is only essential for a tiny minority of women.[20] Although studies showed that it is desirable to handle the problem after the fact, it is preferable to avoid the problem entirely.[20]

## CONCLUSION

Studies have concluded that OF can have a profound impact on the lives of those who suffer from it. It is important for surgeons to have received proper training before attempting a repair, as this will help prevent any potential harm to patients. It is crucial to note that OF can be completely avoided. It is truly heartbreaking to witness the immense suffering that women endure due to prolonged obstructed labor, which not only puts their lives at risk but also increases the chances of developing a fistula if they manage to survive. This can be achieved with a significant investment in health care, requiring time and commitment.

## REFERENCES

1. Miller, S., Lester, F., Webster, M., & Cowan, B. (2005). Obstetric fistula: a preventable tragedy. *Journal of Midwifery & Women's Health*, 50(4), 286-294.
2. Tunçalp, Ö., Tripathi, V., Landry, E., Stanton, C. K., & Ahmed, S. (2014). Measuring the incidence and prevalence of obstetric fistula: approaches, needs and recommendations. *Bulletin of the World Health Organization*, 93, 60-62.
3. Hudson, C. N., & Setchell, M. E. (2011). *Shaw's Textbook of Operative Gynaecology-E-Book*. Elsevier Health Sciences.
4. Creanga, A. A., & Genadry, R. R. (2007). Obstetric fistulas: a clinical review. *International Journal of Gynecology & Obstetrics*, 99, S40-S46.
5. Browning, A. (2022). Obstetric fistulae: a review. *South Sudan Medical Journal*, 15(2), 58-61.
6. Harrison KA. A child-bearing, health and social priorities: A survey of 22774 consecutive hospital births in Zaria, Northern Nigeria. *British journal of obstetrics and gynaecology* (Print). 1985;92(5).
7. Wall LL. Dead mothers and injured wives: the social context of maternal morbidity and mortality among the Hausa of northern Nigeria. *Studies in family planning*. 1998 Dec 1:341-59.

8. Adler AJ, Ronsmans C, Calvert C, Filippi V. Estimating the prevalence of obstetric fistula: a systematic review and meta-analysis. *BMC pregnancy and childbirth*. 2013 Dec;13(1):1-4.
9. Danso, K. A., Martey, J. O., Wall, L. L., & Elkins, T. E. (1996). The epidemiology of genitourinary fistulae in Kumasi, Ghana, 1977–1992. *International Urogynecology Journal*, 7, 117-120.
10. Kelly, J., & Kwast, B. E. (1993). Epidemiologic study of vesicovaginal fistulas in Ethiopia. *International Urogynecology Journal*, 4, 278-281.
11. Wall, L. L., Karshima, J. A., Kirschner, C., & Arrowsmith, S. D. (2004). The obstetric vesicovaginal fistula: characteristics of 899 patients from Jos, Nigeria. *American journal of obstetrics and gynecology*, 190(4), 1011-1016.
12. Bhasker Rao, K. (1975). Genital fistula. *J Obstet Gynaecol India*, 25, 58-65.
13. Bal, J. S. (1975). The vesico-vaginal and allied fistulae—A report on 40 cases. *Med J Zambia*, 9, 69-71.
14. Docquier, J., & Sako, A. (1983). *Fistules recto-vaginales d'origine obstetricale*.
15. Ampofo, K., Otu, T., & Uchebo, G. (1990). Epidemiology of vesico--vaginal fistulae in northern Nigeria. *West African Journal of Medicine*, 9(2), 98-102.
16. Tahzib, F. (1983). Epidemiological determinants of vesicovaginal fistulas. *BJOG: An International Journal of Obstetrics & Gynaecology*, 90(5), 387-391.
17. Champagne, B. J., & McGee, M. F. (2010). Rectovaginal fistula. *Surgical Clinics*, 90(1), 69-82.
18. Novi, J. M., & Northington, G. M. (2005). Rectovaginal fistula. *Urogynecology*, 11(6), 283-293.
19. Goodwin, T. M., Montoro, M. N., Muderspach, L., Paulson, R., & Roy, S. (Eds.). (2010). *Management of common problems in obstetrics and gynecology*. John Wiley & Sons.
20. Muleta, M. (2006). Obstetric fistula in developing countries: a review article. *Journal of Obstetrics and Gynaecology Canada*, 28(11), 962-966.
21. Wall, L. L. (1998). Dead mothers and injured wives: the social context of maternal morbidity and mortality among the Hausa of northern Nigeria. *Studies in family planning*, 341-359.
22. Hillary, M. (2004). *Characteristics of Women Admitted with Obstetric Fistula in the Rural Hospitals in West Pokot, Kenya*. Post Graduate Training Course in Reproductive Health.
23. Liskin, L. S. (1992). Maternal morbidity in developing countries: a review and comments. *International Journal of Gynecology & Obstetrics*, 37(2), 77-87.
24. Haile, A. (1983). *Fistula--a socio-medical problem*. *Ethiopian medical journal*, 21(2), 71-77.
25. Ampofo, K., Otu, T., & Uchebo, G. (1990). Epidemiology of vesico--vaginal fistulae in northern Nigeria. *West African Journal of Medicine*, 9(2), 98-102.
26. Tahzib, F. (1983). Epidemiological determinants of vesicovaginal fistulas. *BJOG: An International Journal of Obstetrics & Gynaecology*, 90(5), 387-391.
27. Muleta, M. (2004). Socio-demographic profile and obstetric experience of fistula patients managed at the Addis Ababa Fistula Hospital. *Ethiopian Medical Journal*, 42(1), 9-16.
28. Kelly, J., & Kwast, B. E. (1993). Epidemiologic study of vesicovaginal fistulas in Ethiopia. *International Urogynecology Journal*, 4, 278-281.
29. Hilton, P., & Ward, A. (1998). Epidemiological and surgical aspects of urogenital fistulae: a review of 25 years' experience in southeast Nigeria. *International Urogynecology Journal*, 9, 189-194.
30. Murphy, M. (1981). Social consequences of vesico-vaginal fistula in northern Nigeria. *Journal of biosocial science*, 13(2), 139-150.
31. Kelly, J. (1992). Vesico-vaginal and recto-vaginal fistulae. *Journal of the Royal Society of Medicine*, 85(5), 257-258.
32. Amr, M. F. (1998). Vesico-vaginal fistula in Jordan. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 80(2), 201-203.
33. Arrowsmith, S. D. (1994). Genitourinary reconstruction in obstetric fistulas. *The Journal of urology*, 152(2), 403-406.
34. Goh, J. T. (1998). Genital tract fistula repair on 116 women. *Australian and New Zealand journal of obstetrics and gynaecology*, 38(2), 158-161.
35. Lawson, J. (1972). *Anorectal Conditions in Obstetric Practice: Rectovaginal Fistulae following Difficult Labour*.
36. Waaldijk, K. (1989). "The"(surgical) Management of Bladder Fistula in 775 Women in Northern Nigeria (Doctoral dissertation).
37. Danso, K. A., Martey, J. O., Wall, L. L., & Elkins, T. E. (1996). The epidemiology of genitourinary fistulae in Kumasi, Ghana, 1977–1992. *International Urogynecology Journal*, 7, 117-120.
38. Muleta, M. (1997). Obstetric fistulae: a retrospective study of 1210 cases at the Addis Ababa Fistula Hospital. *Journal of Obstetrics and Gynaecology*, 17(1), 68-70.
39. Muleta, M., & Willams, G. (1999). Postcoital injuries treated at the Addis Ababa Fistula Hospital, 1991–97. *The Lancet*, 354(9195), 2051-2052.
40. Muleta, M. (2006). Obstetric fistula in developing countries: a review article. *Journal of Obstetrics and Gynaecology Canada*, 28(11), 962-966.
41. Wall, L. L., Arrowsmith, S. D., Briggs, N. D., & Lasseby, A. (2001). Urinary incontinence in the developing world: The obstetric fistula. *Proceedings of the Second International Consultation on Urinary Incontinence*, Paris, 1-67.
42. Waaldijk, K. (1995). Step by Step Surgery of Vesicovaginal Fistulas. *British Journal of Urology*, 76(3), 414.
43. Waaldijk, K. (2004). The immediate management of fresh obstetric fistulas. *American Journal of Obstetrics and Gynecology*, 191(3), 795-799.

44. Muleta, M. (2006). Obstetric fistula in developing countries: a review article. *Journal of Obstetrics and Gynaecology Canada*, 28(11), 962-966.
45. Margolis, T., & Mercer, L. J. (1994). Vesicovaginal fistula. *Obstetrical & gynecological survey*, 49(12), 840-847.
46. Edwards, J. N. T. (1982). Principles of management of the vesicovaginal fistula. *South African Medical Journal*, 62(26), 989-991.
47. Tomlinson, A. J., & Thornton, J. G. (1998). A randomised controlled trial of antibiotic prophylaxis for vesico-vaginal fistula repair. *BJOG: An International Journal of Obstetrics & Gynaecology*, 105(4), 397-399.
48. Elkins, T. E. (1994). Surgery for the obstetric vesicovaginal fistula: a review of 100 operations in 82 patients. *American journal of obstetrics and gynecology*, 170(4), 1108-1120.

#### **CITATION OF THIS ARTICLE**

Supriya Patil, Manisha Laddad, Gauri Shinde. An Obstetric Fistula: A Prospective View. *Bull. Env. Pharmacol. Life Sci., Spl Issue [2]*: 2023: 290-295.