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Outcome of surgical repair of vesicovaginal and rectovaginal fistulas

Sadia Irum[1],
[1]Assistant professor obs gynae PG urogynae Ayub teaching hospital Abbottabad

Humaira Jadoon[2],
[2]Associate professor obs and gyne ayub teaching hospital Abbottabad

Muhammad Zafar Mengal[3],
[3]Associate professor surgery Narowal medical college Narowal

Muhammad Tariq Nazir[4],
[4]Assistant Professor of Surgery Surgical Unit 2 SIMS/ Services Hospital Lahore

Shabnam Tariq[5],
[5]Assistant professor gyne PGMI/ Ameeruddin medical college/ LGH

Misbah kausar javaid[6]
[6]Associate professor of gynae and obst Lahore General Hospital

Corresponding Author:
Humaira Jadoon
Associate professor obs and gyne ayub teaching hospital Abbottabad
Email: Drmaira@hotmail.com

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Abstract

Background: Obstetric fistulae (OF), particularly those occurring from obstructed labor, remain a significant issue in poor nations despite reports that their prevalence has declined in industrialized nations. The most prevalent and frequent kind of urogenital fistulas are vesico-vaginal fistulae (VVF). Surgery is usually needed to address this condition.

Objective: The objective of our study was to determine the Outcome of surgical repair of vesicovaginal and rectovaginal fistulas

Methodology: This retrospective multi-centre study was carried out at the department of gyne and obs Ayub teaching hospital Abbotabad, Lahore General Hospital and Services Hospital Lahore. The study duration was one year from January 2023 to February 2024 by the same surgeon. It included a total of 50 patients who were treated surgically. At three months and six weeks, follow-up appointments were scheduled. Following a successful repair, elective cesarean sections were recommended for subsequent pregnancies. All the data was analyzed by using SPSS version 24.

Results: 88% of VVF cases were caused by obstructed labour, and 18% were iatrogenic. Ninety percent of initial VVF patients were treated surgically using a transvaginal technique, while four percent employed a transabdomenal approach. 54% of patients were single, while 46% needed

multiple procedures. In this investigation, the success rate for repairs was 94%.

Conclusion: Obstructed labor was the primary cause of developing fistulas in our research. In our area, birth trauma continues to be a leading cause of VVF/RVF. Public awareness and the provision of adequate healthcare can help prevent disease. With the first surgery, a successful repair is achievable.

Keywords: Vesicovaginal; Fstulae; Rectovaginal; Surgical repai;r Iatrogenic

Introduction

Prolonged labor and births without timely medical treatment are the usual causes of obstetric fistulae, which are types of morbidity described as rectovaginal or vesicovaginal. According to World Health Organization estimates, 50,000 to 100,000 women are affected by obstetric fistulae (OF) each year.[1] and [2] Given the tight anatomical relationship between the female genital and urinary systems, the risk of harming one must always be taken into account while performing surgery on the other. Long-term consequences are less common these days due to advancements in obstetric and gynecological procedures that assist minimize urinary tract damage and a focus on prompt injury detection and healing. Damage is more likely to occur when basic pathologic causes change the normal anatomy or when intra-operative complications such excessive bleeding or pelvic adhesions fail to adequately identify it.[3] Despite the abundance of research on OF, the information that is currently accessible on the severity of this ailment is varied and regarded as being significantly overstated; as a result, it may not be trustworthy.[4] An estimated 2 million women globally are thought to have OF, with a higher percentage reported from South Asian and sub-Saharan African nations.[5] Vesico-vaginal fistula (VVF) development has severe and catastrophic effects on the physical and mental health of the patient, regardless of the etiology. In the first part of the 20th century, reports of successful VVF repair appeared in the literature, including the transvaginal approach procedure with the use of silver sutures and postoperative bladder draining.[6] According to a research, 91% of women who had hysterectomy experienced VVF.[7] The anterior vaginal wall and intra-ureteric ridge are frequent locations for this kind of VVF.[8] Locally advanced cervical, vaginal, or endometrial cancer accounts for 3% to 5% of VVF cases.[9] Even with advances in technology, vesicovaginal fistula healing is still difficult. According to a research, its origin, size, location, and prior failed attempts at repair are all related to its success rate.[10] Variousauthor reports presenting the experience of VVF repair are available.[11] The stated causes of OF in affluent nations include coital injuries, radiation therapy, cancer, surgery, and ignored foreign bodies. Prolonged labor is still the leading cause of OF in emerging nations.[12] Biological, social and cultural, behavioral, and environmental variables, such as early mother age at birth, poverty, childhood malnutrition, diseases, and genetic susceptibility, are thought to be the root causes of OF in different parts of sub-Saharan Africa [13–15] One possible cause of rectovaginal fistula is childbirth. RVF may result from obstetric damage with a 3rd or 4th degree perineal tear or from prolonged labor with necrosis of the recto-vaginal septum. The rectum, vagina, and recto-vaginal septum are the three locations of RVF.[15] The purpose of this study was to determine the outcome of surgical repair of rectovaginal fistula (RVF) and VVF.

Materials and methods

This retrospective multi-centre study was carried out at the department of gyne and obs Ayub teaching hospital Abbotabad, Lahore General Hospital and Services Hospital Lahore. The study duration was one year from January 2023 to February 2024 by the same surgeon. The inclusion

criteria were all the patients of (RVF) and VVF who underwent surgery at our setting. It included a total of 50 patients who were treated surgically. Continuous urine or stool leaking per vaginum was a problem shared by all patients. The clinical examination and history were used to make the diagnosis. Following three months of fistula growth or a prior effort at repair, these individuals had surgery. Following the initial vaginal examination, a dye test and inspection under anesthesia were performed to determine the size and location of the fistula. The type of fistula was taken into consideration when choosing the repair path. All patients had vaginal approach using the lithotomy position. For three weeks, Foley's catheter was kept in place. For three months, patients were instructed to refrain from coitus. Three days before to surgery, the guts of individuals with RVF were prepared. In addition to being on a liquid diet before to surgery, patients were maintained off of oxygen for 48 hours following surgery and then resumed on a liquid diet for five days. At three months and six weeks, follow-up appointments were scheduled. Following a successful repair, elective cesarean sections were recommended for subsequent pregnancies. All the data was analyzed by using SPSS version 24. Frequency and percentages were calculated for variables like age, type of fistulas and attempt of surgery

Results

Seven patients (14%) were between the ages of 41 and 60, while forty-three patients (86%) were between the ages of 20 and 40 (Figure 1). The range of parity was 1 to 9. Every patient came from a poor socioeconomic background.

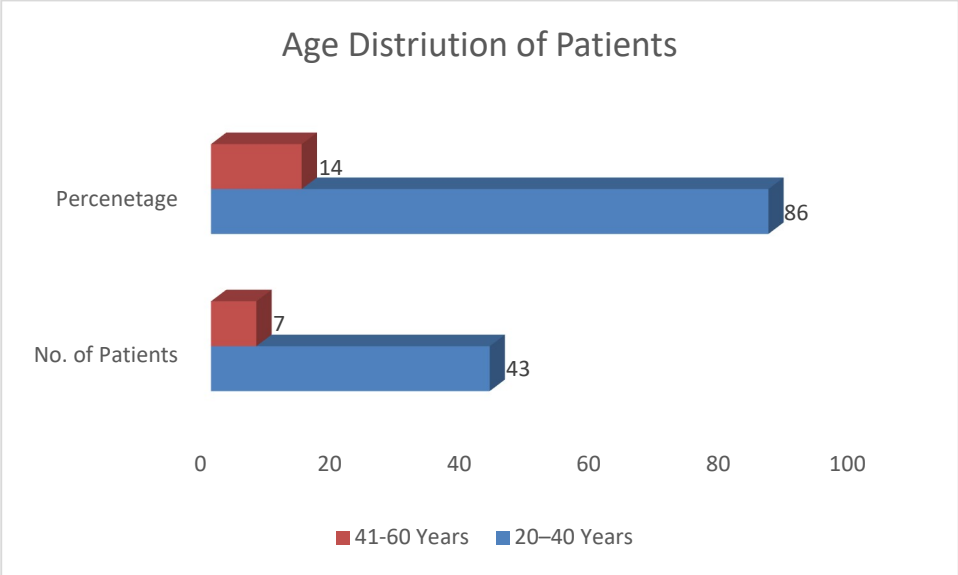

Figure 1 Age distribution of study population

Of these fifty patients, forty-four had VVF (88%) and six were RVF (12%). Eight (16%) of the nine (18%) iatrogenic fistulae patients were VVF instances. One instance of iatrogenic VVF occurred following a caesarean section and caesarean hysterectomy, whereas seven cases developed following a complete abdominal hysterectomy. Obstructed labor difficulties were linked to 41 (82%) of the VVF patients.

Obstetric problems were the primary cause of all RVF cases. VVFs ranged in size from 3 to 22 mm, and in six cases, they were placed in the vaginal vault. Thirty-five instances included anterior vaginal wall involvement, and nine cases were juxtacervical.

A single attempt was successful in 27 (54%) of the patients. >1 effort at repair was required in 23 (46%) individuals. The severe fibrous tissues presence and the healthy tissues absence around the fistula caused the repair to fail in three patients (6%) out of the total. Ninety percent of patients had vaginal repairs, six percent required both vaginal and abdominal repairs, and two patients required trans-abdominal repairs. Table 1

Table : Data of RV and VVF surgical Repair

Parameters	**Number (n)**	**Percentage (%)**
Type of fistula		
VVF	44	88
RVF	6	12
Etiology		
Obstetrical	41	82
Iatrogenic	9	18
Attempts of surgery		
Single	27	54
Multiple	23	46
Approach for surgery		
Transabdomenal	2	4
Transvaginal	45	90
Combined	3	6
Success of repair	47	94

Discussion

In affluent nations with high educational standards and a culture that values timely access to emergency obstetric treatment, obstetric fistulae have been eradicated or are extremely uncommon. When a woman in a wealthy nation sustains a severe injury as a result of blocked labor, the incident is noteworthy enough to warrant a case report.[12, 13] On the other hand, millions of obstetric fistulae remain unrepaired throughout South Asia and sub-Saharan Africa. Since it is avoidable, health care practitioners should aim to implement interventions such providing obstetric care to all women, raising public awareness, and providing TBA (Traditional Birth Attendant) training. Of the women in our research, 86% were between the ages of 20 and 40, and 14% were between the ages of 41 and 60. Twelve percent were primipara and eighty-eight percent were multipara, which is similar to the demographic information of patients from another research that was carried out in Pakistan.[16] Every significant study has demonstrated that obstetric causes account for 70–95% of VVF in poor nations.[11,12] In contrast, obstetric etiology was present in 82% of patients in our research. When the fistula closes and the patient becomes continent, the VVF repair is considered successful. Ninety-four percent of the patients in our research had effective repairs. According to several studies [3, 17,] and [20,] vaginal repair ranges from 67 to 95%, whereas abdominal healing is reported to be between 85 and 100%.[21] All six of our RVF patients had obstetrical causes. One possible cause of rectovaginal fistula is childbirth. In our investigation, the RVF diameters varied from 3 mm to 22 mm. The incidence of postpartum RVF is lower in wealthy countries where the primary causes are radiation treatment and cancer. The risk is increased by hysterectomy and high radiation dosages.[22,23]

Conclusions

Obstructed labour was the primary cause of developing fistulas in our research. In our area, birth

trauma continues to be a leading cause of VVF/RVF. Public awareness and the provision of adequate healthcare can help prevent disease. With the first surgery, a successful repair is achievable.

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