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Research Article

**A DESCRIPTIVE CROSS-SECTIONAL RESEARCH TO ASSESS
THE SUCCESS RATE OF VESICOVAGINAL FISTULA
REPAIRED THROUGH TRANSABDOMINAL APPROACH****¹Dr. Maha Aftab, ²Dr. Muhammad Yawer Saleem, ³Dr. Sheikh Muhammad Amjad**¹Fatima Memorial Hospital²DHQ Hospital Kasur³Bahwal Victoria Hospital Bahawalpur**Abstract:**

Objective: The objective of this research is to review vesicovaginal fistula causes and repair outcomes with the help of Transabdominal Technique.

Methodology: We conducted this descriptive cross-sectional research at Sir Ganga Ram Hospital, Lahore from February to September 2017 (Surgical Department). In the course of research, we studied and reviewed all the records of vesicovaginal fistula treated through Transabdominal repair approach. We did not include any case with complex vesicovaginal fistula. Operation notes provided all the information about the procedure and operative outcomes. Post-operative outcomes of the follow up were also recorded at the interval of one week, three weeks, 40 days and three months duration for every patient treated with Transabdominal repair method.

Results: Research sample consisted of twenty-seven patients who underwent Transabdominal repair in order to treat Vesicovaginal Fistula. The patients were in the age bracket of (26 – 63) years. Among 27 patients 22 experienced an obstructed labour and as a result, developed vesicovaginal fistula; whereas, other five patients developed vesicovaginal fistula because of the (Post-Hysterectomy) Gynecological surgery. Patients remained in the hospital for a mean time of seven days and follow-up of five patients lost during treatment. Eight patients had an incidence of UTI (Urinary Tract Infection) (29.63%); whereas, Transient Urinary Stress Incontinence was reported in two patients (7.40%).

Conclusion: As an outcome of this research, the researcher suggests that repeated cause of the development of vesicovaginal fistula is obstetrical trauma; whereas, satisfactory operative outcomes are possible through a transabdominal approach for vesicovaginal fistula repair.

Keywords: Genitourinary Fistula (GF) and Vesicovaginal Fistula (VF).

Corresponding author:**Dr. Maha Aftab,**

Fatima Memorial Hospital

QR code



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INTRODUCTION:

An abnormal communication between urinary bladder and vagina results in the shape of Vesicovaginal Fistula. Under-developed countries face the incidence of VF the most because of the substandard clinical practice of gynaecological surgeries and labour [1, 2]. There many associated risks and dangers of vesicovaginal fistula such as social cut-off due to a persistent leakage and odour of urination, religious activities performance inability, psychological disorders and even divorce in few of the cases [3].

Under-developed countries are at much risk of vesicovaginal development than developed countries with respective proportion bracket of (84% – 97%) and (3% – 8%) [4 – 7]. This difference is because of restricted and substandard clinical practice of gynaecological surgeries and labour [1, 2]. Gynaecological surgical trauma is the basic cause of the vesicovaginal fistula in the developed countries mainly hysterectomies [1, 8]. Other reasons for VF also include pelvic trauma, illegal abortions, radical pelvic surgeries and radiation necrosis [9, 10].

There is a number of ways to repair vesicovaginal fistula and all of those approaches have various success rates which vary from the approach to approach. In this particular research, the objective of this research is to review vesicovaginal fistula causes and repair outcomes with the help of Transabdominal Technique.

METHODOLOGY:

We conducted this descriptive cross-sectional research at Sir Ganga Ram Hospital, Lahore from February to September 2017 (Surgical Department). In the course of research, we studied and reviewed all the records of vesicovaginal fistula treated through Transabdominal repair approach. We did not include any case with complex vesicovaginal fistula. The repair of the fistula by an abdominal route is performed after urethral catheterization and

Cystoscopy. We performed lower midline abdominal incision in 22 patients (81.5%) of laparotomy; whereas, five patients (18.5%) through Pfannenstiel incision. The dissection of the bladder was made from the vagina and also closed the vagina and bladder separately in two different layers through vicryle (2 / 0) or (3 / 0).

Post-operative drainage of the bladder also complied through extra-vesical drain which was removed after drainage stoppage. The researcher also removed per-urethral catheter after a period of two weeks. We also forbade all the patients to avoid vaginal intercourse for at least three months. Operation notes provided all the information about the procedure and operative outcomes. Post-operative outcomes of the follow up were also recorded at the interval of one week, three weeks, 40 days and three months duration for every patient treated with Transabdominal repair method. We documented investigative outcomes, detailed history and physical examination from hospital notes and surgical procedure information with operative outcomes from the records of operation theatre of the hospital.

RESULTS:

The research sample consisted of twenty-seven patients who underwent Transabdominal repair in order to treat Vesicovaginal Fistula. The patients were in the age bracket of (26 – 63) years; whereas, mean age was forty years. Among 27 patients 22 experienced an obstructed labour and as a result, developed vesicovaginal fistula; whereas, other five patients developed vesicovaginal fistula because of the (Post-Hysterectomy) Gynecological surgery. Patients remained in the hospital for a mean time of seven days and follow-up of five patients lost during treatment. Eight patients had an incidence of UTI (Urinary Tract Infection) (29.63%); whereas, Transient Urinary Stress Incontinence was reported in two patients (7.40%). Detailed outcomes are as under (Table – I & II).

Table – I: Cystoscopic Outcomes

Vesicovaginal Fistula Types	Number	Percentage
Supra-Trigonal	11	40.74
Trigonal	6	22.20
Combined	10	37.04

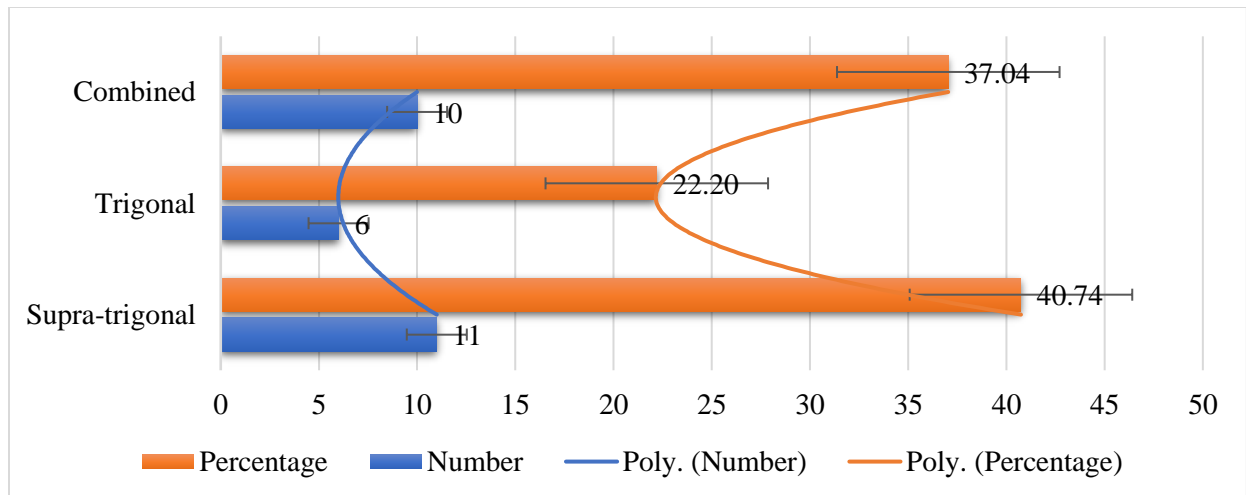


Table – II: Case Wise Summary of Transabdominal Repair Approach

Case No	Causes	Previous	Time Since Fistula (Months)	Successful
Case – 1	OT	Recurrent	4	Yes
Case – 2	PH	None	6	Yes
Case – 3	OT	Recurrent	5	Recurrent
Case – 4	OT	None	4	Yes
Case – 5	PH	None	5	Yes
Case – 6	OT	Recurrent	5	Yes
Case – 7	OT	Recurrent	6	Yes
Case – 8	PH	None	5	Yes
Case – 9	OT	Recurrent	4	Yes
Case – 10	OT	None	6	Yes
Case – 11	OT	Recurrent	5	Yes
Case – 12	PH	None	6	Yes
Case – 13	OT	None	5	Yes
Case – 14	OT	None	6	Yes
Case – 15	PH	None	4	Yes
Case – 16	OT	None	4	Yes
Case – 17	OT	None	5	Yes
Case – 18	OT	None	6	Yes
Case – 19	OT	None	5	Yes
Case – 20	OT	None	5	Yes
Case – 21	OT	None	5	Yes
Case – 22	OT	None	6	Yes
Case – 23	OT	None	6	Yes
Case – 24	OT	None	6	Yes
Case – 25	OT	None	5	Yes
Case – 26	OT	None	4	Yes
Case – 27	OT	None	5	Yes

OT: Obstetrical Trauma, **PH:** Post-Hysterectomy

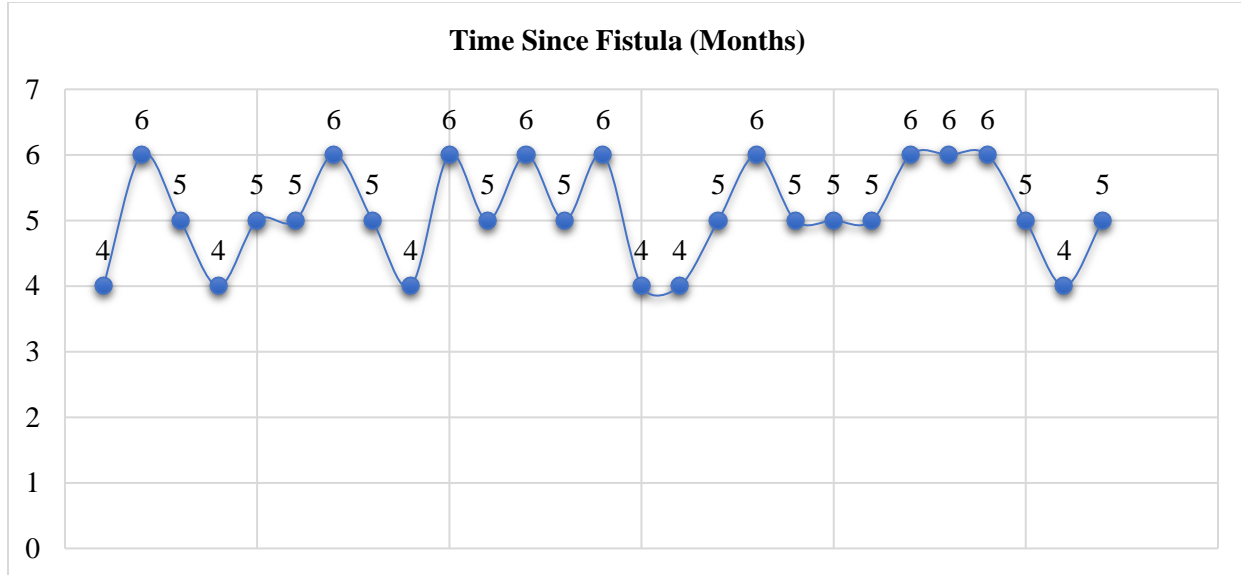
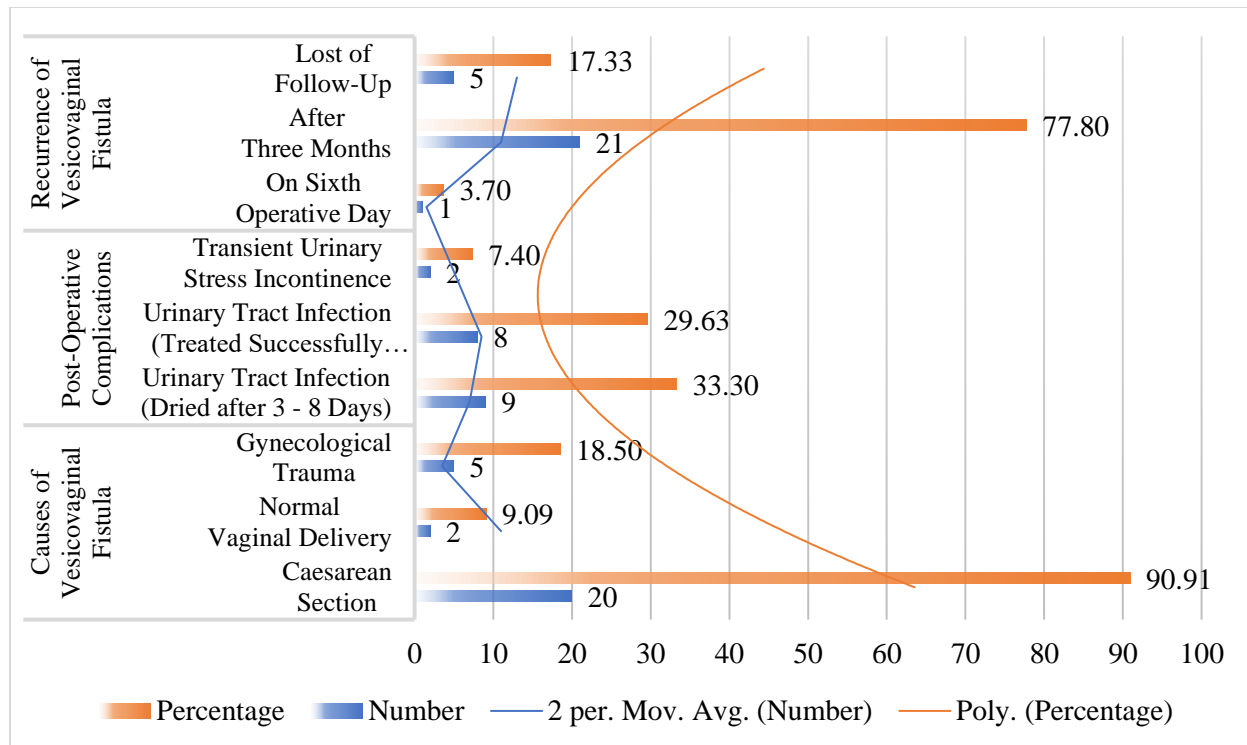


Table – III: Post-Operative Outcomes, VF Causes and Recurrence

Details		Number	Percentage
Causes of Vesicovaginal Fistula	Caesarean Section	20	90.91
	Normal Vaginal Delivery	2	9.09
	Gynaecological Trauma	5	18.50
Post-Operative Complications	Urinary Tract Infection (Dried after 3 - 8 Days)	9	33.30
	Urinary Tract Infection (Treated Successfully with Antibiotic Therapy)	8	29.63
	Transient Urinary Stress Incontinence	2	7.40
Recurrence of Vesicovaginal Fistula	On Sixth Operative Day	1	3.70
	After Three Months	21	77.80
	Loss of Follow-Up	5	17.33



DISCUSSION:

Vesicovaginal fistula greatly hampers the emotional and physical well-being of the patients because of consistent odour and soiling. It also has various associated complications such as vaginal wall damage and recurrent UTI (Urinary Tract Infection) which makes the sexual interaction almost impossible and unpleasant [1].

The age of the patients was in the range of 26 – 63 years with a mean age of forty years; whereas, Hanif reported a mean age of thirty-five years in his research [3]. Hassan MA estimated teenagers and primipara cases with respective proportions of 37% and 57%.

The repeated reason behind VF was obstructed labour as reported in our research in about (81.5%) patients which is same as reported by Kapoor and many others [12 – 16]. Our second most repeated reason for hysterectomy is also comparable with the outcomes of Kapoor [12]. According to Kochakarn W outcomes, laparoscopic hysterectomy and open hysterectomy lead the major causes of VF [17]. We reported about 40.74% cases of the supra-trigonal fistula with further distribution of trigonal and supra-trigonal fistula in 22.2% and 37.04% respectively as reported by Kapoor [12].

Since the start of genitourinary fistula repair, it is under criticism and it has received numerous

controversies in terms of repair route and timing [3]. Surgeons approach it differently because of various associated factors such as for cause, onset time, size and site. A major determinant in the choice of repair approach is the experience and training of the surgeons. Majority of the surgeons choose Transabdominal repair approach as their first line choice of vesicovaginal fistula repair [18]. Our preferred approach was Transabdominal repair as the majority of the patients had a supra-trigonal fistula or compound fistula.

The patients reported within the four to five months of vesicovaginal fistula development which left no option but a delayed repair of the fistula. Vesicovaginal fistula repair has many associated controversies about the time of discovery and reporting to doctors. O'Connor and Margolis recommend a delayed fistula surgical repair especially at a delay of twelve months until the resolution of inflammation [19, 20]. Whereas, Carr preferred time to time examination of the fistula at an interval of two weeks before the commencement of surgical procedures at the inflammation of the tissues [21]. This occurs in the timeframe of four to eight weeks after the surgical indexing.

Recurrence of the incidence was observed in a single patient with a proportion of (3.7%); whereas, in other research studies, the recurrence rate was about ten percent [22, 23]. Indian authors also reported rate of

failure in about 5.8% patients; whereas, a local author reported failure rate as 12.03% [12, 14]. Our research reports a mean hospitalization of seven; whereas, other studies reported less hospitalization [14].

Kochakarn estimated the incidence of urine leakage at a certain post-operative stage in almost every patient [17]. These cases might have the closure of urinary bladder being watertight for minor urine leakages. We kept on monitoring such cases who presented a regular leakage in order to keep the bladder empty. Leakage stopped at once within 3 – 8 days post-operatively. Eight patients developed UTI because of the urethral catheter disposition (29.63%) on the fourteenth postoperative day.

CONCLUSION:

There is an urgent need for various multi-centre research studies to handle the subject at hand in order to decrease the rate of morbidity due to the vesicovaginal fistula. As an outcome of this research, the researcher suggests that repeated cause of the development of vesicovaginal fistula is obstetrical trauma; whereas, satisfactory operative outcomes are possible through a transabdominal approach for vesicovaginal fistula repair.

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