

## Tuboplasty/Tubal Surgery in the ERA of IVF

RUQQIA SULTANA<sup>1</sup>, SADIA IRUM<sup>2</sup>, SEEMAB ZAFAR<sup>3</sup>, QURAT UL AIN NAZIR<sup>4</sup>, OMAIR IJAZ<sup>5</sup>

<sup>1</sup>Associate Professor Ayub Teaching Hospital Abbottabad

<sup>2</sup>Assistant Professor Ayub Teaching Hospital Abbottabad

<sup>3</sup>Assistant Professor Azad Jammu and Kashmir Medical College Muzaffarabad

<sup>4</sup>Senior Consultants, Ayub teaching hospital Abbottabad

<sup>5</sup>Senior Consultants, Ayub teaching hospital Abbottabad

Corresponding Author: Sadia Irum, Email: [saadiarium@yahoo.com](mailto:saadiarium@yahoo.com)

### ABSTRACT

**Aim:** The detach of this research was to expand the relatively limited database on the efficiency of tubal surgery for the treatment of female sterility in Pakistan.

**Methodology:** It was a qualitative descriptive series that took place at the Gynecology Unit of Ayub Teaching Hospital Abbottabad from May 2020 to April 2021. The research comprised 25 individuals who had tubal obstruction due to tubal illness or prior tubal ligation and were unwilling or unable to pay for assisted reproductive treatments. After a thorough assessment and evaluation of the pair, patients who presented with Fibroidectomy and azoospermia were eliminated from the research. Tuboplasty was performed on individuals utilizing open laparotomy procedures such as tubal excision and anastomosis, aerolysin, fimbriate, and salpingostomy. HSG examined the relatively brief result at three months and the lengthy result in the form of conceptions. The analytical program SPSS version 24 was used to look into the information. For constant factors like age and gender, standard deviations and means have been computed, whereas rates and percentages were determined for categorical data including such research outcomes.

**Results:** Absolute effectiveness was reported in 11 patients (53%), with 8 (36%) produced owing to restoration of sterilization, 2 (9%) produced after a combined of achielia's as well as fimbriate on one side and salpingostomy on the other, and the second three (19%) produced after fimbriate and adhesiolysis.

**Conclusion:** Tuboplasty proved effective in regaining fertility in individuals who were unable to afford IVF due to expense, societal standards, or religious principles.

**Keywords:** Tuboplasty, IVF, Subfertility, Tubal patency test.

### INTRODUCTION

One healthy couple living together and through frequent sexual contact has a 17 to 21% likelihood of becoming pregnant in a single menstrual cycle. If pregnancy does not happen after the first year of unsupervised vaginal intercourse, a pair is termed as sub sterile, and a professional examination and study must be provided to this type of couple. In females, the origins might be found in the ovaries, tubes, or uterus. Tubal injury accounts for 23% of instances of sterility [1].

Tubal surgery might be more beneficial than no therapy for women having a mild tubal illness. It could be explored as a potential therapy in facilities wherever suitable competence is provided [2].

Simultaneous salpingography + tubal catheterization or hysteroscopic tubal cannulation could be therapy choices for women having intermediate tubal blockage because those procedures increase the likelihood of conception [3]. Women experiencing hydrosalpinx must be given salpingectomy, particularly through laparoscopy, preceding undergoing IVF therapy, since this increases the likelihood of a live birth [4]. Tubal surgery may take the form of fibroblast, salpingostomy, sphingolipids, cornual implantation, tubal resection, and re-anastomosis, and may remain performed in both damaged tubes and following sterilization reverse [5].

Tuboplasty could be performed using both open and laparoscopic procedures, though the effectiveness of the treatment is dependent on the existence of tubal illness, the surgeon's competence, and the ultimate length of the tubes reached at the end of the treatment [6]. According to literature, live birth rates following salpingostomy range from 21-38%, with an increase of up to 41-62% in situations of moderate tubal illness. With the introduction of IVF-ET, tubal operation is already becoming increasingly rare since effectiveness is dependent on highly specialized training, which has become increasingly scarce because of the increasing quantity of certified IVF institutions. Nonetheless, tubal surgical treatment is an essential alternative for people having moderate tubal disease who need to skip IVF [7].

### METHODOLOGY

From May 2020 to April 2021, a case series of research was carried out at Gynae unit B, Ayub teaching hospital, Abbottabad.

The research remained accepted by the chairwoman of the Ethics Appraisal group. Through a straightforward sampling procedure, 22 individuals who presented had a tubal blockage due to tubal disease or past tubal ligation and were reluctant or unable to pay for infertility treatment treatments were recruited for the research. After a complete history, assessment, and associated examinations, patients presenting with Fibroidectomy and azoospermia have been eliminated from the research. A thorough history and assessment of the individuals have been performed, particularly specific attention paid to vaginal secretions and pelvic discomfort.

Several baseline tests were completed, along with a full blood count, time random blood sugar, viral serology, in addition, a urine routine check. The study of the husband's sperm was an important aspect of the inquiry. Before surgery, a high vaginal and endocervical swab was performed to address any pelvic inflammatory illness that was detected. Following systematic therapy and independent inquiry of the physician before the surgery, completely consent was obtained after trying to address the patient's issue, the most appropriate method needed including such removal surgery, fimbriate, or aerolysin long with its success rate and potential post-operative problems. Before the procedure, a hysterosalpingography/laparoscopy and dye testing have been performed to determine the location of the obstruction and any founder, as well as to design the most appropriate tubal operations for the individual.

Subsequent to sterilization, the diseased or lighted part was usually removed, accompanied through later part anastomosis. Fimbriate was being used when there was blockage at the fimbria end, as well as in a few instances in which here remained per tubal adhesions, but for obvious tubes only hemolysis was used. As illustrated in figure 2, Norte's cathedral remained kept in fallopian tube after the treatment and extracted afterwards 48 hours to assure patency in addition ultimate potential. End-to-end tubal anastomosis was accomplished utilizing vicryl 3/0-5/0 in a single or two-layer finish. Sutures are often put in the muscle layer of the tube at 7, 4, 7, and 10 o'clock, supplemented by serosal threading if necessary.

Interrupted stitches with vicryl 4/0 were used to achieve hemostasis. Methylene blue dye has been administered using a number 7 size foley catheter that had previously been placed in the

uterine cavity pre-operatively to ensure a patent airway at the end of the treatment.

The treatment was performed four months later to assess the short-term effectiveness. Regardless of what happens, the long-term efficacy of the procedure was judged in the form of the participant's conception.

The analytical program SPSS version 24 was used to examine the data. For continuous variables like age and parity, standard deviations and mean values have been computed, whereas frequencies and proportions were determined for categorical variables including such research outcomes.



Figure 1:



Figure 2:

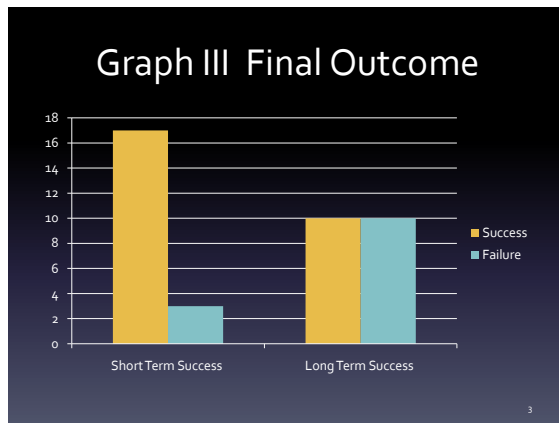


Figure 3:

## RESULTS

The maximum of 22 individuals participated in the trial, with twelve (61%) undergoing tubal ligation reversion. Adeoye's have been performed on six patients (27%), three of whom had a prior C-section and three of whom had pelvic inflammatory illness. Fimbriate was performed on four patients (27%), one of whom had a prior O5 scar and ectopic acheilia + salpingostomy on one side

and fimbriate on the other. Participants varied in age from 27 to 39 years. The percentage of patented fallopian tubes four months after treatment has been established in healthy participants (86%), including two persons enduring just one student tube and 15 people were having both fallopian tubes patent.

The comprehensive achievement was reported in 11 patients (55%) (table 1), with 8 (38%) envisioned secondary to inversion of sterilizations, 2 (8%) envisioned after conjunction of acheilia's and fimbriate on one edge and salpingostomy on the other, and the remaining 3 (11%) envisioned after fimbriate and desmolases.

Table 1: Short and Long-Term Success Rates:

Research Outcome	Frequency
<b>Short term Success</b>	
Yes	3 (15.0)
No	17 (85.0)
<b>Long Term Success</b>	
No	11 (52.1)
Yes	11 (52.1)

## DISCUSSION

Depending on the circumstances and demographic, the tubal element incidence varies from 11 to 32%. One of the most common tubal factors sub infertility causes is a pelvic inflammatory illness, that is on the rise as a result of antibiotic overuse and pathogen sensitivity [8]. Female sterilization using fallopian tube interruption is utilized as a preventive measure among 7.8% of married women worldwide [9]. Numerous of these women pursue reproductive recovery for the range of explanations (e.g., changes in marital status, desire for subsequent offspring, psychological concerns) [10].

Female age just under 34 years and duration of much more than 5cm at the conclusion of the treatment in the apparent lack of any Co-morbidities such as endometriosis or PID are good prognostic variables, and it was exceptionally clear in our research that achievement had been seen more than that in patient populations that were younger than 34 years [11], and in the significant proportion of cases tubal length accomplished at the final moment of the multiple surgeries was more than 6cm [12]. In our investigation, the remaining length at the conclusion of the treatment varied from 5.6 to 8cm. In our investigation, clinical compliance was shown more following sterilization reversal when there was no other associated illness and there was minimal variation in lumen diameter [13].

The surgery was less successful in patients (16%) who had concurrent diseases such as PID. The surgical strategy used in our research remained laparotomy with macro surgical technique, although the outcome of the procedure may also remain enhanced through employing macro surgery methodology laparoscopic and robotic tuboplasty [14]. The benefits of tubal surgery over IVF include that this is a one-time operation that requires less hospitalization and is less intrusive. Also, it eliminates the associated risks during IVF, such as intravenous injection, continuous monitoring, and OHSS, but has a higher chance of ectopic pregnancy than IVF [15].

There have been no documented changes in ovarian stimulation or IVF results. There was also no difference in ovarian reserve following laparoscopic tubal ligation with bipolar cautery. In one study of women aged 41 to 44, cumulative intrauterine fertility levels ranged from 42.9% to 71.7%. Other research, done on 149 individuals, indicated a 41% success rate. The findings of the preceding research are similar that our research, which found a 51% lengthy achievement in tubal surgery [16].

## CONCLUSION

Tuboplasty has been effective in recovering infertility in individuals who were unable to obtain IVF due to expense, societal conventions, or religious beliefs. The doctor's objective for subfertile spouse's ought to be to make his best efforts to provide

the parents with a living kid. To reach the intended result, the caregiver must thoroughly examine various choices and personalize them based on the child's conditions, and tuboplasty ought not to be regarded as a fading art.

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