

TO DETERMINE THE SUCCESS RATE (CONCEPTION) AFTER TUBAL RECANALISATION DONE FOR STERILISATION REVERSAL IN THE DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY, S.M.S MEDICAL COLLEGE & ASSOCIATED HOSPITALS, JAIPUR

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Abstract

Background: Female sterilization through tubal ligation is primarily used to permanently prevent a patient from having a spontaneous pregnancy (as opposed to pregnancy via in vitro fertilization) in the future.

Methods: This study was a Descriptive type of observational study conducted at Department of Obstetrics and Gynaecology, SMS medical college and associated hospitals, Jaipur.

Results: Out of the 70 females who underwent recanalisation, 44 females conceived during the study period, giving a success rate of 62.9%. More than one-third females (37.1%) however did not conceive.

Conclusion: Sterilisation though intended to be permanent method of birth control, required reversal in many females, mostly due to death of children. Recanalisation procedure being simple and effective method in respect to IVF is increasing in demand. During sterilisation, laparoscopic sterilisation should be preferred and isthmus should be preferred as site of occlusion as success of recanalisation is higher

Keywords: Female, sterilisation, laparoscopic.

Introduction:

The inability to conceive after one year of appropriate, timed, and unprotected sexual intercourse is termed as infertility. Infertility is multi-factorial in nature and factors might be male related (approximately 26% to 30%) or a combination of male and female factors (mixed infertility; approximately 40%). It can be attributed to female factors related to ovulation disorders (approximately 21% to 25%), tubal factors (approximately 14% to 20%), cervical, uterine, or peritoneal disorders (approximately 10% to 13%), and/or idiopathic or unexplained infertility (approximately 25% to 28%).¹⁻⁴

Fallopian tubes are the conduit for the transportation of the oocyte into the uterus and when damaged prevent normal transport of the oocyte and sperm through the tube. Diagnosis of tubal occlusion is often made via hysterosalpingogram (HSG). Tubal obstruction is one of the most common causes of female infertility, It involves the proximal, mid, or distal portion of fallopian tubes. Proximal portion of the fallopian due to its anatomy (straight or slightly curved or tortuous) remain highly susceptible to muscular spasm, accumulation of viscous secretion, mucosal agglutination, and intrinsic luminal filling defects,^{5,6} This leads to obstruction and infertility.⁷ Female sterilization through tubal ligation is primarily used to permanently prevent a patient from having a

spontaneous pregnancy (as opposed to pregnancy via in vitro fertilization) in the future.

MATERIAL AND METHODS

TYPE OF STUDY-

This study was a Descriptive type of observational study.

STUDY DESIGN-

The study was conducted with a Prospective design

PLACE OF STUDY-

The study was conducted at Department of Obstetrics and Gynaecology, SMS medical college and associated hospitals, Jaipur.

STUDY DURATION-

The study was conducted from March 2020 till July 2021. This period includes data collection till sample size was achieved and another 2 months for data compilation and analysis and write up of thesis.

STUDY UNIVERSE-

Study universe comprised of all women who had undergone sterilization procedure in the past and attending Gynaecology OPD in Obstetrics and Gynaecology

Department at S.M.S. Medical College, Jaipur, willing to undergo tubal recanalisation for reversal of contraception.

STUDY POPULATION -

All women aged less than or equal to 39 years, who have undergone tubal recanalisation procedure at Obstetrics and Gynaecology Department at S.M.S. Medical College, Jaipur, willing to participate in the study and would be available for regular follow up.

INCLUSION CRITERIA

- Women age less than or equal to 39 years.
- Women who have undergone sterilization procedure in the past.
- Opting for tubal recanalisation for reversal of contraception, irrespective of the reason.
- Willing to participate in the study.

EXCLUSION CRITERIA

- Women with ovulatory disturbances.
- Women with pelvic inflammatory disease-causing tubal deformities.
- Women with severe endometriosis.
- Women with other causes of infertility.
- Women with medical disorders.

SAMPLE SIZE

Sample size was calculated to be 62 subjects at 95% confidence limit and absolute allowable error of 12% assuming conception rates of 63.3% after recanalisation as per findings of *Sandhyarani Behera et al*²⁹. So for this study, a minimum of 62 cases of recanalisation were required, which was further extended to 70 cases assuming 10% drop outs

RESULTS

Table 1: Socio-demographic characteristics of study subjects

	Outcome	N	Percentage (out of 70)
Age group(years)	25-29	43	61.4
	30-34	14	20
	35-39	13	18.6
Literacy status	Illiterate	8	11.4
	Primary	15	21.4
	Upto sec	17	24.3
	Sen sec	13	18.6
	Graduate	17	24.3
Religion	Hindu	55	78.6
	Muslim	15	21.4
Residence	Rural	31	44.3
	Urban	39	55.7
Occupation	working	19	27.1
	Housewife	51	72.9

Most of the females who underwent recanalisation belonged to 25-29 years age group (61.4%). Only 18.6% females were aged 35-39 years. About one fourth (24.3%) of females were graduate, while 11.4% were illiterate. Most of the females were Hindu (78.6%). Females were more from urban areas (55.7%), while 44.3% were from rural areas. Most of the females (72.9%) were housewives, while only 27.1% were working.

Table 2: Conception after tubal recanalisation among study subjects

Outcome	N	Percentage
Conceived	44	62.9
Not conceived	26	37.1
Total	70	100

Out of the 70 females who underwent recanalisation, 44 females conceived during the study period, giving a success rate of 62.9%. More than one-third females (37.1%) however did not conceive.

DISCUSSION

Female sterilization is the most common permanent population control method practiced in the country. Several techniques have been defined to achieve the goal. However, due to changed personal circumstances, many women who undergo sterilization are compelled to seek restoration of fertility. Often such women are referred for assisted reproductive techniques (ART), but they involve financial and emotional cost, are not universally accessible, and chances of favourable outcome are not that significant and may require repeated attempts. Recanalisation surgery may better benefit these women, which requires a deft surgical hand, but does not depend on high cost technology necessary for ART. The results of this reversal surgery however may relate to a number of factors, including the age of the patient, method followed for sterilization, and the procedure performed for reversal. The present study conducted to study those factors associated with successful outcome.

Out of the 70 females who underwent recanalisation, 44 females conceived during the study period, giving a success rate of 62.9%. Out of the

44 females who successfully conceived after tubal recanalisation, most pregnancy ended with live births (91%), while abortion was seen in 2 (4.5%) females. Ectopic pregnancy occurred in 2 (4.5%) females. In a similar study, **Madhu Jain et al (2003)**³ found that thirty out of the fifty women (60%) undergoing tubal recanalisation by microsurgical method conceived successfully. In yet another similar study, **S.C.Ribeiro et al (2004)**⁴ found that pregnancy rate was 56.5% (13/23), excluding ectopic pregnancies. **K Jayakrishnan et al**

(2011)⁵ in a study assessing success rate of recanalisation, found the overall pregnancy rate to be 58.8%.

Ramalingappa A et al (2012)⁶ found that 44 % of women who underwent tubal recanalisation, conceived successfully.

CONCLUSION:

Sterilisation though intended to be permanent method of birth control, required reversal in many females, mostly due to death of children. Recanalisation procedure being simple and effective method in respect to IVF is increasing in demand. During sterilisation, laparoscopic sterilisation should be preferred and isthmus should be preferred as site of occlusion as success of recanalisation is higher.

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