

Research Article

A Study on Post-Sterilisation Failure in a Tertiary Care Hospital

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DOI: <https://doi.org/10.24321/2454.8642.201914>

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How to cite this article:

Vincent V, Saha MK. A Study on Post-Sterilisation Failure in a Tertiary Care Hospital. *Rec Adv Path Lab Med* 2019; 5(3): 5-7.

Date of Submission: 2019-06-29

Date of Acceptance: 2019-09-10

A B S T R A C T

Background: Female sterilization or tubal ligation is the most accepted method of contraception in India. The most popular method used in female sterilization in India is the laparoscopic tubal occlusion. Sterilization failure may occur, though rates are as low as around 0.1-0.3%.

Objectives: The objectives of the study states to assess the prevalence of ectopic pregnancy and to study the types of ectopic pregnancies.

Materials and Methods: This prospective study was conducted between January 2011 to December 2018 in the Obstetrics unit at GB Pant Hospital, ANIMS, Port Blair. Records of cases of post sterilization failure were studied. The results were described in proportions.

Results: 76% of the sterilizations were done during interval period. 56% of recurrence occurred after 2-5 years of surgery. 61 % of the pregnancies after sterilisation failure were ectopic pregnancies.

Conclusion: The chances of post sterilization failures though minimal, must be explained to the patients and when to seek medical help, to diagnose at the earliest.

Keywords: Contraception, Post-Sterilisation, Tubal Ligation

Introduction

Fallopian tube ligation commonly called as female sterilization is a well-known, common and widely practised contraception method worldwide and also in India. Around 5-6 million sterilization are done annually. It accounts to 98% of the permanent contraception method. Tubectomy method of contraception contributes to 62% of contraceptive procedures done. Laparoscopic tubal occlusion is the most common practised method in India among the female sterilization techniques.¹

Minilaparotomy, laparoscopic sterilization and hysteroscopic methods are the common methods of female sterilization

practised in India, Minilaparotomy is the most popular postpartum sterilization practised in our Country.²

Though tubal ligation done by Minilaparotomy is not a complicated procedure, a size of the incision is comparatively large. Post-operative wound infection and pain are widely reported. The duration of hospital stay is also long. On the contrary in laparoscopic sterilization technique, the length of incision is smaller and the duration of stay in the hospital is also less needs. The only key feature in laparoscopic procedure is the need for a well-trained gynaecologist.²

However, unfortunately in some women; sterilization failure may occur though rates are as low as around 0.1-0.3%.³

Post sterilization failure commonly presents as ectopic pregnancy and it accounts for around 12% of all ectopic cases.⁴ This study has been planned to assess the prevalence of ectopic pregnancy in our hospital

Objectives

The objectives of the study states:

- To assess the prevalence of ectopic pregnancy
- To study the types of ectopic pregnancy

Methodology

This prospective study has been conducted in the study was conducted between January 2011 to December 2018 in the Obstetrics unit at GB Pant Hospital, ANIMS, Port Blair on 67 subjects. Records of post-sterilization failure cases were studied for age of occurrence, method of sterilization, timing of surgery, duration between surgery and occurrence of sterilization failure, location of the pregnancy etc. and the results were analysed using SPSS 16 and tabulated.

Result

The maximum number of sterilization failure was between the age group of 26-30 years (43%). Laparotomy was the most common procedure done (64%). Around 76% of the sterilization was done during interval period. Around 56% of recurrence occurred after 2-5 years of surgery. 61% of the sterilisation failure pregnancies were ectopic pregnancies.

Table I. Distribution of study population according to various parameters studied

	Frequency	Percentage
Age group		
20-25	16	23.88
26-30	29	43.28
31-35	12	17.92
36-40	8	11.94
41-45	2	2.98
Method of tubectomy		
Minilaparotomy	12	17.91
Laparotomy	43	64.18
Laparoscopic Sterilization	12	17.91
Timing of Surgery		
Puerperal sterilization	12	17.91
Interval sterilization	51	76.11
During LSCS	4	5.98
Duration between surgery and sterilization failure		
<2 years	11	16.42
2-5 years	38	56.72
5-10 years	16	23.88

10-15 years	2	2.98
Implantation site		
Intrauterine	24	35.83
Ectopic	41	61.19
Others	2	2.98

Discussion

Laparotomy was the common procedure done (64%). Rathod S, Samal SK⁵ reported a similar result (71.4%). Ectopic gestation was 61%. Vessey M et al.⁷ reported 44% of ectopic pregnancy, while Shah JP et al.⁶ reports a lower prevalence of 4.53%. Rock JA et al. observed "recanalization" and "tuboperitoneal fistulas" as a main cause for recanalization.⁸ They also noticed development of endometriosis in the tip of the proximal segment of the ligated tube in a high percentage of patients. Prior to the development of the fistula, the tube appeared to have been dilated. Progressive extension of the endometriosis, perhaps aided by internal pressure, seems to have resulted in penetration of the muscular wall of the tube with subsequent fistula formation either in the broad ligament or in the peritoneal cavity. PID, endosalpingitis, necrosis or tubal atrophy are the other associate factors.⁸ In surgeries done during puerperal period, Spontaneous tubal reapproximation common occurs because the tubes will be dilated during that period, and hence more chance for tubal reanastomosis and recanalization. blind pouches and slit like spaces will be formed during reanastomosis which are the common sites of ectopic implantation.⁹ Stock RJ et al. suggests that fluid movement inside the remaining tube may favour implantation.¹⁰

Conclusion

The chances of post sterilization failures though so minimal, must be explained to the patients. The chances of ectopic and hence mortality is high in post sterilization failures and hence the patients must be asked to come for immediate review once they have a missed period for further evaluation.

Conflict of Interest: None

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