

Retrospective Study of Sterilisation Failure Cases in a Tertiary Care Centre

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I. Introduction

Worldwide Female sterilization is the most popular and effective method of contraception. In addition to being permanent it is safe and relatively free from side effects. 5-6 million sterilization is done annually in India. The most popular method being laparoscopic sterilization. Sterilization failure may occur at a rate of 0.1 to 0.8 %. Post sterilization failure may present as ectopic which is of concern as it can cause high morbidity and mortality due to delayed diagnosis.

II. Materials and methods

The study was conducted retrospectively on sterilization failure cases presenting in the Department of obstetrics and gynecology, Government Rajaji Hospital, Madurai, for a period of one year from January 2018 to December 2018. As ours is a tertiary care referral centre, many sterilization failure cases done in nearby PHC's, head quarters hospitals, family planning associations are referred. Demographic data like age of patient, place of sterilization, method of sterilization, interval between sterilization and failure are delivered from hospital data's

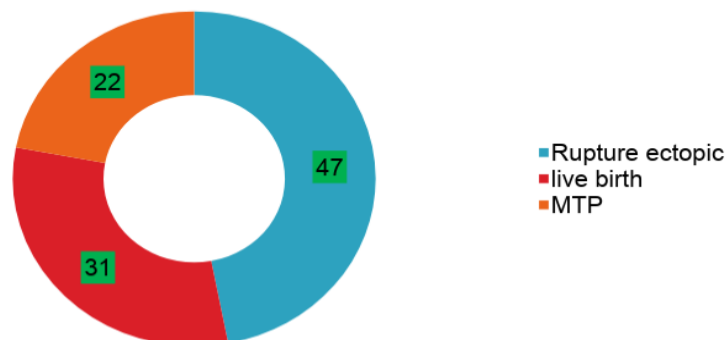
Resterilisation

Resterilization was done in all the patients in the study. In case of ruptured ectopic partial/total salpingectomy was done at ruptured site, proceeded to Resterilization on the opposite side. In patients opting to terminate the pregnancy MVA/MTP done, proceeded to re sterilization. Those patients opting to continue pregnancy are followed up. If they have normal vaginal delivery a post partum Resterilization is done. In case of LSCS a concurrent Resterilization is done.

III. Results

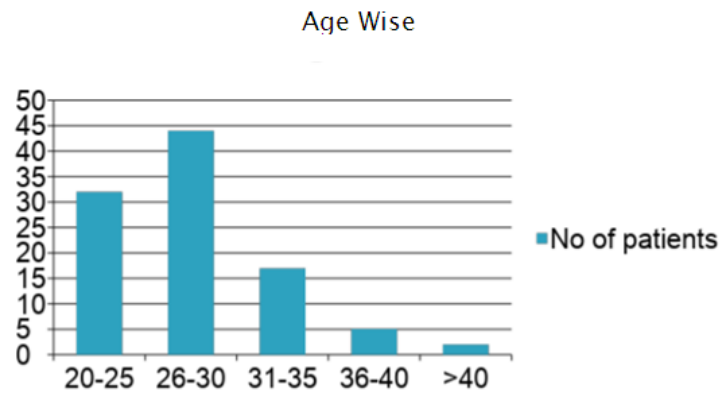
During the study of one year total 36 cases of sterilization failure were reported. Out of 36 cases 17(47%) cases reported as ectopic pregnancy, 16 cases presented as rupture ectopic, 1 case as cold ectopic. 19 cases presented as intra uterine pregnancy (53%). Of the 19 intra uterine pregnancy 8 (42%) opted to continue the pregnancy and 11(58%) opted to terminate the pregnancy. 4 patients underwent 2nd trimester MTP, 8 had 1st trimester MTP. 6 patients had LSCS, 2 had vaginal delivery.

Obstetric outcome Scales



Age wise distribution

Commonest age group was between 26 yrs to 30 yrs,16(44%).Youngest being 23 years old eldest being 42 years old.

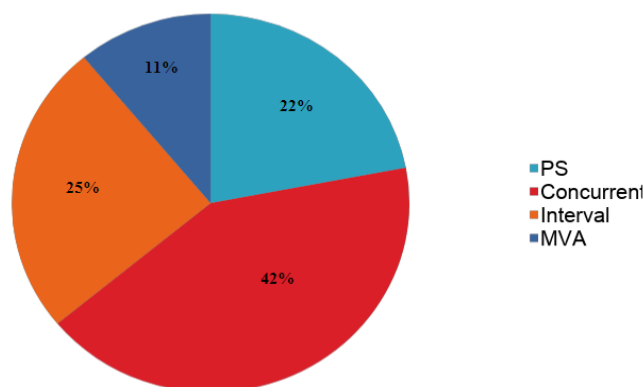


Place of Primary Sterilization

S. NO	PLACE OF STERILISATION	NO OF PATIENTS	PERCENTAGE
1	GOVERNMENT RAJAJI HOSPITAL , MADURAI	13	36%
2	FAMILY PLANNING ASSOCIATION	5	14%
3	GOVERNMENT HEAD QUARTERS HOSPITAL	6	17%
4	PHC	12	33%
	TOTAL	36	100%

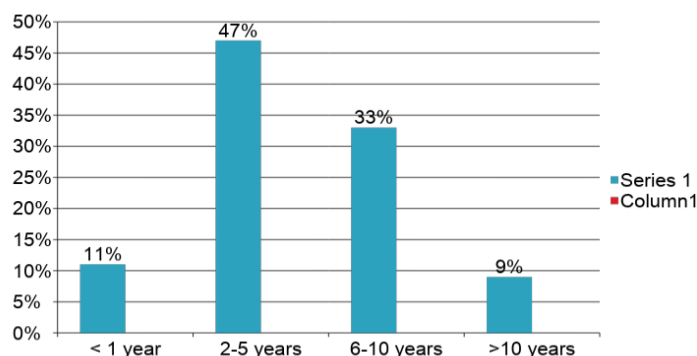
**Total sterilization in GRH-
JAN 2018 TO DECEMBER 2018**

- PS - 440
- MVA with TAT-261
- TAT - 305
- LS- 30
- Concurrent sterilization- 1967
- Total Female sterilization - 3003
- Sterilization failure Rate in GRH – 0.4%



Method of primary sterilization

Interval between sterilization and sterilization failure



Evidence of sterilisation

Evidence of sterilization was found in all the cases, Partial recanalisation of the cut ends was found on one side on all cases. In LS – Total 6 cases, falope ring was absent on one side for all the cases. In 4 cases of Previous Concurrent sterilization, dense omental adhesions were found making the Resterilization difficult.

Less than 1 yr – 4 CASES

TIMING	METHOD	PLACE	OUTCOME
MVA	LS	FPA	MTP
INTERVAL	LS	PHC	LIVE BIRTH
CONCURRENT	CONCURRENT	GRH	RUPTURE ECTOPIC
PS	MINILAPAROTOMY	GH	RUPTURE ECTOPIC

Interestingly one had failed sterilization twice. Concurrent tubal ligation was done in Head quarters hospital. 7 Years later she had intra uterine pregnancy which she opted to terminate.MVA with LS done in family planning association. 6 months later she again presented with intra uterine pregnancy of 8 weeks gestational age.MVA with total salpingectomy was done at Government Rajaji hospital.

IV. Discussion

In the study, Failure rate was more in younger age, 76% less than 30 years. Concurrent sterilization and PS contributed (64%) to maximum number of failure. This could be due to anatomical changes in pregnancy making the tubes edematous, friable and congested leading to incomplete tubal occlusion.

Around 50% presented as rupture ectopic which was more common after Concurrent sterilization (47%) and PS (41%) probably due to spontaneous recanalisation and abnormal luminal anatomy leading to ectopic.

History of tubal sterilization does not rule out the possibility of ectopic, even after many years , In the study one patient had ruptured ectopic after 13 years. Rupture ectopic is potentially fatal requiring high level of suspicion, immediate laparotomy along with blood product transfusion. All the 16 patients received packed cell transfusions, 2 patients requiring 3 packed cell transfusion.

Failure interval was less than 5 years in 58%, less than 10 years in 33%,more than 10 years in 9% less than 1 year in 11%.longest interval was 13 years. Failure interval less than 1 year is considered mainly due to initial non occlusion or faulty technique. proper patient selection, proper identification of the tubes and method of tubal ligation according to the guidelines laid by the standards of female sterilization will reduce failure rate.Fimbriectomy is not an alternative to reduce failure rate.

Spontaneous recanalization either partial or complete is the commonest cause of failure. Spontaneous tubal approximation may occur by Tuboperitoneal fistula formation.

Modified pomeroys technique



Laparoscopic Sterilization

Proper patient selection.

Look for the groove after the application of fallop rings after the application.

Look for the blanching of the tubes after the application.



V. Conclusion

The psychological and physical morbidity following failed sterilization often leads to litigation. A short interval to failure are suggestive of a negligent failure mechanism.

Proper counseling of patients should be done and patient should be explained about failure rates and alerted about both intra and extra uterine pregnancy.

Surgical procedures should be documented precisely regarding difficulty in identifying tubes due to adhesions, slipped rings.

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