



A Study of Sterilization in Patients with Medical Disorders in a Tertiary Institute

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ABSTRACT:

Background:The incidence of high risk pregnancies have increased,hence proper contraception is necessary too. Considering the risks involved in higher order birth and poor compliance of patients, permanent sterilization plays a major role in preventing morbidity and mortality of women with medical disorders.

Study design:It's a retrospective study done at our tertiary care center, Government RajajiHospital, Madurai which analyses the patients with medical disorders undergoing permanent sterilization.The type of sterilization and whether any concurrent MTP was done were analysed. Patients who had Cesarean delivery with concurrent sterilization were excluded. A total of 418 patients were studied in a period of one year and were followed up for one month for any complications.

Conclusion:Heart disease being most common 131 (31.3%) followed by hypertension and its complications (15.3 %). Among 418 patients, 71 (16.9%) had termination of pregnancy.

KEY WORDS: Permanent Sterilization, medical disorders, termination of pregnancy.

I. INTRODUCTION:

With advances in medical field, life expectancy in patients with severe medical conditions have increased. So when women with these conditions experience pregnancy, they fall under high risk category and they need meticulous care. These medical conditions manifest severely in elderly gravida and in multiparous women. So it is necessary for us to emphasis on reliable contraceptive measures. Considering the risk of higher order birth, poor compliance and limitations of contraceptive options available in few medical conditions, permanent sterilization options prove to be better for few patients and it has to be individualized.

STUDY:

In our Institute Government Rajaji Hospital, Madurai, we did a retrospective study for a period of one year from December 2021 to November 2022 . We studied 418 patients with medical disorders who underwent permanent sterilization (puerperal sterilization and transabdominal sterilization) alone and those who had medical termination of pregnancy and sterilization. Those who had undergone Cesarean delivery with concurrent sterilization were excluded from the study.

Age distribution

Age group	No. of cases with medical disorders
22 to 25 years	133
26 to 30 years	184
30 to 35 years	82
36 to 40 years	19

Parity of the patients

Parity	No. Of. Cases with medical disorders
P2L2	233
P3L3	159
P4L4	22
P5L5	4



Maximum people were in the age group of 26-30 years (44 %), followed by 22-25 (31. 8%).Mostof them were with two living children 55.74%, followed by P3L3 (38%).

High risk factors:

Medical disorder	No.of cases	Medical disorder	No. of cases
Heart disease	131	Severe preeclampsia	2
NSP	64	Polio	2
Hypothyroid	53	Subacute meningitis	1
Chronic Hypertension	33	Post nephrectomy	1
GDM	32	Renal disease	1
Type 2 DM	22	Eclampsia	1
Anemia	24	Rheumatoid arthritis	1
Hyperthyroid	16	Chronic liver disease	1
Bronchial asthma	8	Gestational thrombocytopenia	1
Schizophrenia	6	DVT	1
Tuberculosis	5	Tuberculosis	1
HbsAg	3	SLE	1
HIV	2	Takayasu arteritis	1
ITP	3	Cholelithiasis	1

Proceduredone:

Procedure done	No. of cases
Puerperal sterilization	259
Laparoscopic sterilization	38
Transabdominaltubectomy	50
MVA with LS	31
MVA with TAT	40

In our institute during the same time period, December 2021 to November 2022, total of 1306 patients were sterilized. Among them 32% had medical disorders.

Comparison of total number of sterilization done andpatients with medical disorders among them:

Procedure	Total no. of cases	No. of cases with medical disorder	% of cases with medical disorder
Puerperal sterilization	784	259	33%
Laparoscopic sterilization	206	38	18.4%
Transabdominaltubectomy	82	50	60.9%
MVA with LS	125	31	24.8%
MVA with TAT	109	40	36.6%
TOTAL	1306	418	32%

COMPLICATIONS.:

A 37 yrs patient, P2L2A2, a case of type 2 Diabetes mellitus who had MVA with TAT was admitted with wound gaping on 9 th post operative day and the same was resutured.A 26years P3L3, a case of chronic hypertension who had puerperal sterilization presented to us on 14 th post operative day with breathlessness and was diagnosed with Peripartumcardiomyopathy with acute pulmonary edema. She was found to be non compliant with anti hypertensive medications at home. Shewas managed by multidisciplinary team including the cardiologists. She recovered and was discharged after 15 days.

II. CONCLUSION:

Among 1306 sterilizations performed in the same period, December 2021 to November 2022, 32% of cases had medical disorders. Heart disease being most common 131 (31.3%) followed by hypertension and its complications (15.3 %). Among 418 patients, 71 cases (16.9%) had termination of pregnancy.

Considering increased risk of MMR and PNMR in patients with medical disorders proper counselling and sterilization wouldbe of help. Even women with one child with high risk factors like pulmonary hypertension, severe valvular



dysfunction, severe CKD can be counselled for sterilization considering the maternal condition.

III. DISCUSSION

Contraceptive counselling should begin early in females with heart disease and other high risk cases. In coming to a decision about the method of contraception, the following issues should be considered: (i) the risk of pregnancy for the mother and the consequences of an unplanned pregnancy; (ii) the risks of the contraceptive method; (iii) failure rates; (iv) the non-contraceptive benefits; (v) the availability; (vi) the individual's preferences; (vii) protection against infection; and (viii) costs

Contraceptive methods can be divided into 3 tiers of effectiveness based on their typical-use failure rates. Tier I methods, including permanent sterilization and long-acting reversible contraceptives (LARC) (intrauterine devices [IUDs] and implants), have typical-use 1-year failure rates of <1%. Tier II methods, including combined hormonal contraceptives (CHCs), progestin-only pills, and the depot medroxyprogesterone acetate (DMPA) injection, have typical-use failure rates of 6% to 12%/year. Tier III methods, including barrier methods, withdrawal, and natural family planning, have typical-use 1-year failure rates of 18% to 28%. Sexually active women using no method of contraception have an 85% risk of becoming pregnant within 1 year.

Effectiveness of contraceptive methods is based on their typical-use 1-year failure rates. The Tier I methods—long-acting reversible methods (IUD and implant) and permanent sterilization—are safe and most effective for women with cardiovascular conditions. Tier II methods have lower effectiveness and increased safety concerns in the estrogen-containing methods (combined hormonal pill, transdermal patch, vaginal ring). The Tier III methods have the lowest effectiveness and are not recommended for use in isolation for women at increased risk of complications of pregnancy

For those who have completed childbearing, sterilization using tubal ligation is a safe and effective contraceptive option. Additionally, tubal ligation may have non-contraceptive benefits, such as improved menstrual bleeding patterns and decreased risks of ovarian cancer. As with any procedure, the patient must understand the risks, benefits, indications, and alternatives.

When tubal ligation is planned for high risk patients, the patients should be thoroughly

evaluated before surgery. Standard clinical evaluation and investigation protocols should be followed. Postpartum tubal ligation should be postponed whenever there is evidence of hemodynamic instability due to any cause, refractory hypertension, moderate-to-severe preeclampsia, severe anemia, or sepsis. Counseling regarding alternative methods of contraception should be provided to these parturient

Considering the health status of the mother, severity of the disease, compliance of the patient, method of sterilization has to be chosen wisely. Permanent method of sterilization would prevent anxiety and fear among high risk patients with medical disorders. The decision to advise permanent sterilization should be judiciously given especially to the underprivileged women in the face of high perinatal and infant mortality rate. The cases are to be individualized

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