FAILURE OF STERILIZATION

by

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SUMMARY

Total fifteen cases of pregnancy following sterilization by various methods at different places but detected at N. M. Wadia Hospital, Solapur have been analysed. During the same period 1326 sterilizations were performed at the hospital. 253 sterilizations were done concurrently with some other procedures. In 3 cases of failure of sterilizations, tubectomy was done along with caesarean section. In 2 cases interval between tubectomy and pregnancy was more than 4 years. In 11 cases improper technique or failure to ligate one of the tube was responsible for failure of sterilization.

Introduction

Female sterilization is being widely accepted as a permanent method of contraception all over the world, both in developing as well as in developed countries. This may be because sterilization is a very reliable method of family planning and with the introduction of minilap and laparoscopic surgery, has become highly effective, safe and quick.

However it must be stated that no method of sterilization has been found, which is without failure. It must also be stated that the failure rate varies with experience of the surgeon and the technique with which it is performed.

Table I shows the failure rates quoted in the literature. It can be seen that the failure rates vary between 0.7% to 0.5%. The various reasons given for failure are as follows:

(a) Pregnancy already conceived but too early to be recognised.

(b) Surgical error in identifying fallopian tube.

TABLE I

Failure Rates Quoted by Various Surgeons

Surgeons	Year	Total Sterilizations	Failure Rate
a. Garb	1957	29496	0.71%
b. Lull and Mitchell	1950	1550	0.12%
c. Thomas	1953	35000	0.5 %
d. Tietze	1960	20000	0.17%
e. Present Series	1986	1326	1.2 %

(c) Spontaneous rejoining of the severed tube.

(d) A formation of a new passage in the tube.

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Accepted for publication on 17-8-86.

In the early part of this century Pomeroy advocated the Pomeroy's method of excising a portion of tube. Lull and Mitchell (1950) reported their results of failure by this method to be 0.25%. This failure invoked further modifications like total salphingectomy, peritonisation of cut ends of the tubes, cornual resection etc. Now improved methods as minilap and laparoscopy, developed since 1960 transformed sterilization into a quick and safe out patient procedure.

With the above perspective in mind we have made an attempt to study the failure rates of sterilization, where the operations have been performed through different routes, by different techniques and by different surgeons. A total of 15 cases of pregnancy following sterilization by various methods at different places, but detected at N. M. Wadia Hospital, have been analysed during the period of 3 years from 1st April 82 to 31st March 1986. Out of the 15 cases 10 cases were operated previously in N. M. Wadia Hospital itself and 5 cases outside. During this period, a total of 1326 sterilizations were performed. The various methods used are shown in Table II. In 803 cases post-partum sterilization was done, while only 28 cases were subjected to vaginal stetrilization. 253 sterilizations were done concurrently with some other procedures as shown in Table III.

TABLE II
Various Methods Used for Sterilization in Present Series

1.	Laparoscopic	348
2.	Abdominal Sterilization Puerperal	803
3.	Interval minilap Sterilization	147
4.	Vaginal Sterilization	28
	Total	1326

TABLE III
List of Operations Done Concurrently With Sterilization

1.	L.S.C.S. + Sterilization	107
2.	Suction evacuaton + Vag. St.	14
3.	-do- + Lap. St.	60
4.	-do- + Minilap St.	44
5.	Emcredyl + Lap. St.	19
6.	Emcredyl + Minilap St.	8
7.	Appendectomy + Tubectomy	1
	Total	253

In 107 cases tubectomy was done with caesarean section. Prystowsky and Eastman (1955) analysed 1830 Pomeroy's sterilization. The failure rate was 1:57 when it was performed with concurrent caesarean section, while 1:340 when done in puerperium shortly after vaginal delivery. Similar figures have been reported by Lee *et al* (1951) using Madlener's method. Husbands *et al* (1970) were unable to substantiate the increased rate of failure of sterilization associated with caesarean section. One of the various aspects of failure of sterilization is occasional long interval between operation and conception.

In the present series in 2 cases interval was more than 4 years as shown in Table IV.

TABLE IV
Interval Between Sterilization and Failure

a.	0-6 months	Nil
b.	6 months to 2 years	5
c.	2 years to 4 years	6
d.	4 years to 6 years	2

In Table V the various case reports in which type and route of operation, operative findings and the procedure adapted now are shown. Out of 15 cases, 9 cases were those, in whom puerperal sterlization was done and in 3 cases

TABLE V

Sr. No.	Name of Patient	Age/Parity	When Tubectomy done and Type	Operative findings	Present Pregnancy	Present
1.	V. N. D.	39/3 FTND	Post Partum 5 yrs. back	Both tubes unligated	2 months Amenorrhoea	SE + Lap. Sterilization
2.	S. B. S.	28/4 FTND L.D. 14 days	* Puerperal 4 yrs. back	Left tube was not ligated Right tube was cut and ligated	PTND Baby expired on 7th day	Left tubectomy done
3.	R. A. S.	28/4 FTND L.D. 3 yrs.	Puerperal 3 yrs. back	Left Tube unligated	2 months pregnancy	SE + Abdominal Sterilization
4.	S. R. G.	44/3 LSCS	* Tubectomy at time of LSCS 4 yrs. back	Rt. ligated Lt. unligated Plenty of adhesions	Full term	Classical C.S. with tubectomy
5.	K. S. P.	34/8th Para	* Tubectomy at CS (Classical 2 years back	Plenty of adhesions Breech presentation Rt. tube not ligated Placenta attached to scar	8 months Amenorrhoea with P.V. Bleeding after 24 hours of admission	Expl. Laparotomy. Rupture of Scar + Suturing with tubectomy done
6.	S. N. K.	29/5th Para	Puerperal sterilization 1½ yrs. back	Rt. tube unligated Lt. ligated	3 months Ameno.	SE with abdominal Sterilization
7.	D. M. B.	30/3 FTND	Puerperal sterilization 1 yr. back	Lt. tube was ligated Rt. tube not ligated	4 months Ameno.	Emcredyl with lap. St. on Rt. Tube
8.	K. L. M.	26/5 FTND	* Lap. St. (Cautery) 1½ yrs. back	—	1½ months Ameno.	SE + Vag. St. Pt. refused Abd. or Lap St.
9.	S. N. D.	25/3 FTND	Puerperal sterilization in 1982	Lt. tube not ligated instead suture was on Mesosalpinx Rt. tubue ligated	Admitted for 8 months Ameno. with APH + Absent FHS	LSCS + Tuboctomy done baby SB
10.	K. K. P.	30/3 FTND	Tubectomy 2 yrs. back	One tue not ligated	2 months Ameno.	SE with Abdominal Sterilization
11.	S. V. N.	22/2 FTND	Minilap. 1 yr. back puerperal	Both tubes appeared ligated	1½ months Ameno. Pr. test + ve	SE with Abdominal Sterilization

TABLE V (Contd.)

Sr. No.	Name of Patient	Age/Parity	When Tubectomy done and Type	Operative findings	Present Pregnancy	Present
12.	S. D.	33/2 FTND H/o Puerperal	Vaginal Tubectomy 6 yrs. back	Both tubes showed nodules. Tube cut and sent for HPR small lumen mucosa, unremarkable. No evidence of infection	2½ months Ameno.	SE + Abd. St.
13.	A. N. M.	30/3 FTND	Tubectomy with LSCS	Rt. tube was ligated Lt. side not ligated	FTND	Abd. Sterilization
14.	M. D. B.	32/3 FTND	* Abd. St. Puerperal	Previous site of ligation very near fimbrial ends	2 months Ameno.	SE + Abd. St.
15.	S. G.	35/4 FTND	Abd. Sterilization Puerperal	Rt. tube not properly ligated	FTND	Abd. Sterilization

* Indicates tubectomy done outside.

sterilization was done at caesarean section. There was 1 case each of laparoscopic sterilization (Cautery), vaginal sterilization and interval sterilization.

The causes of failure in present series were:

1. Improper or failure to ligate tubes either left or right—11 cases.

2. In 3 cases tubes seemed to be ligated properly though cause of failure could not be ascertained.

3. In one case vaginal sterilization was performed after failure. Exact cause of failure could not be judged.

Conclusion

Abdominal sterilization is a seemingly simple procedure. The sterilizations are routinely done by unexperienced junior surgeons. Tubal sterilizations are taken very casually. The sterilzations should be done meticulously. Proper care must be taken for identification of fallopian tubes. The sterilization should be done by senior person or under his supervision. We did not find any increased percentage of failure with sterilizations done at caesarean section.

Acknowledgement

I am thankful to the Chairman, N. M. Wadia Hospital for permitting me to use hospital data.

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