

IATROGENIC HYDROSALPINX

by

S. J. NAGALOTIMATH,* M.D., D.C.P.

and

VAIJAYANTIMALA BHATEJA,** M.B.,B.S.

Introduction

Tubal ligation has become a popular method of sterilization in India. Several thousands of women undergo this operation every year. Short term complications of this operation are few. Long term post-sterilization complications are not much documented. The present communication is intended to bring home that iatrogenic hydrosalpinx a complication of tubal sterilization is a reality. Authors believe that this complication should be entertained by the obstetricians as a possible cause for the lower abdominal pain, of these patients before diagnosing them as psychic. Further this complication seems to be associated with a particular technique of tubal ligation. So avoidance of that particular technique may not only reduce such a complication but will also remove apprehension in the minds of prospective mothers about post-sterilization sufferings.

Material and Methods

Five specimens of hydrosalpingectomy and 7 of total hysterectomy of different patients form the material of this study.

*Professor of Pathology.

**Postgraduate Student.

Department of Pathology, J.N. Medical College, Belgaum.

Accepted for publication on 30-9-81.

The specimens were received from the District Hospital and private Nursing Homes of Belgaum during 1978 to 1980. Gross and histopathological features of these specimens were studied. Retrospective review of history and clinical findings of the corresponding cases was done. The salient features of these cases are tabulated in Table I.

Observations

All the twelve patients were multipara and they had undergone sterilization operation. Post-sterilization period varied from 2 to 14 years. The chief complaint in all these women was lower abdominal pain. The onset of pain varied from 3 months to 2 years after the operation. Pain was dull in nature, aggravated by lifting heavy objects. Frequently the patients used to get disturbed very much by the abdominal pain. In addition to the pain, 1 patient had amenorrhoea and 2 had menorrhagia. On two occasions patients were admitted in Surgical Wards with the diagnosis of appendicitis. Rest of the cases entered the Gynaecology Ward. Clinical examination in 10 cases revealed a small mass in the pelvis and mild tenderness. This finding made the clinicians to entertain the diagnoses such as pelvic mass, ovarian cyst, appendicitis with appendicular mass, ectopic pregnancy, mass in right or left iliac fossa,

TABLE I
Salient Clinical Features

S. No.	Reg. No.	Ward	Age Yrs.	FTND	Post-sterilisation period	Complaints	Clinical Diagnosis	Operation	Result
1.	924/78	Gyn.	42	VII	4 years	Chr. abd. pain 3½ yrs. Menorrhagia 2½ yrs.	D.U.B.	Hysterectomy Hydrosalpin- gectomy	Good
2.	1220/78	Gyn.	32	VI	5 years	Chr. abd. pain 4½ yrs.	Pelvic mass	Hydrosalpin- gectomy	Good
3.	1282/78	Gyn.	45	IV	14 years	Chr. abd. pain 12 yrs. Menorrhagia 3 yrs.	D.U.B.	Hysterectomy Hydrosalpin- gectomy	Good
4.	1536/78	Surg.	28	II	3 years	Chr. abd. pain 2 yrs; 9 mths.	Chronic appendi- citis	Appendicec- tomy + Hy- drosalpin- gectomy	Good
5.	2064/78	Pvt.	39	II	8 years	Chr. abd. pain 6 yrs.	Ovarian cyst	Hysterectomy Hydrosalpin- gectomy	Good
6.	1245/79	Surg.	35	IV	2 years	Chr. abd. pain 1 yr.	Chronic appendi- citis	Appendicec- tomy Hydrosalpin- gectomy	Good
7.	1405/79	Gyn.	35	III	5 years	Chr. abd. pain 4½ yrs.	with mass Pelvic mass	Hysterectomy Hydrosalpin- gectomy	Good
8.	2177/79	Gyn.	32	III	4 years	Chr. abd. pain 3½ yrs.	? Ecto- pic	Hydrosalpin- gectomy	Good
9.	2205/79	Gyn.	40	IV	4 years	Chr. abd. pain 3½ yrs.	Pelvic infection	Hysterectomy Hydrosalpin- gectomy	Good
10.	2411/79	Gyn.	34	IV	4 years	Chr. abd. pain 3 yrs.	Mass in Right I. Fossa	-do-	Good

TABLE I (Contd.)

1	2	3	4	5	6	7	8	9	10
11.	2513/79	Gyn.	48	V	8 years	Chr. abd. pain 6 yrs.	Tuberculous T.A. mass Mass in the pelvis	-do-	Good
12.	349/80	Gyn.	32	III	6½ years	Chr. abd. pain 6 yrs.		-do-	Good

FTND = Full-Term Normal Delivery.

DUB = Dysfunctional Uterine Bleeding.

LIF = Left Iliac Fossa.

Rt. I Fossa = Right Iliac Fossa.

tuberculous salpingitis etc. In 2 cases where menorrhagia was associated with pain clinical diagnosis of dysfunctional uterine bleeding was entertained.

On laparotomy all the cases showed segmental hydrosalpinx on both sides. In 3 cases only hydrosalpingectomy was carried out. Hydrosalpingectomy and appendicectomy was done in 2 cases. In the remaining 7 cases hysterectomy along with hydrosalpingectomy was done. The chronic abdominal pain which had followed the sterilization disappeared completely in all these operated cases.

Both the appendices were normal. Hydrosalpingectomy specimens consisted of small cystic tubular swellings. The shape of these swellings resembled either inverted 'V' or horizontal 'S'. The size varied from 3 to 5 centimetres. Both the ends of this segment were blind but tapering. The fluid in the tube was clear and watery.

In the hysterectomy specimens, the tubes were identified in three segments. Medially situated cornual segment was found in continuity with uterus. The lateral ends of these segments were blind. Otherwise this segment appeared normal. The second segment, the fimbrial segment looked normal except for the blind medial end. The middle segment showed all the features observed in the hydrosalpingectomy specimens. Out of 7 specimens of uterus, 5 were normal and 2 revealed adenomyosis. There was no other pathological lesion noted in these specimens submitted for histopathological examination.

Discussion

The twelve specimens received in the department of Pathology, shown in Table I, belonged to the cases of lower abdominal pain following tubal sterilization.

At laparotomy all these cases revealed bilateral hydrosalpinx of middle segment. Removal of such segment freed all the patients from the lower abdominal pain. This is a strong evidence to suspect that the hydrosalpinx per se was responsible for abdominal pain. Even in those 2 cases with adenomyosis, the onset, the character, the relation of pain does favour hydrosalpinx and not the adenomyosis as a cause for the pain.

Post-sterilization hydrosalpinx and lower abdominal pain noted in the present cases is not a new observation. This entity has been recorded by earlier workers in other countries (Grayburn 1958). However, the attention of Indian workers has not been attracted by this condition. Therefore, no such case reports or papers could be traced in Indian literature. To understand the problem and its magnitude surgeons and gynaecologists need to keep this condition in mind and look for it in all those cases where laparotomy is performed in sterilized women.

Further one has to think as to the type of sterilization that may lead to such a complication. When one analyses the features of hydrosalpinx in the present series, one suspects that most probably Madlener's technique is likely to lead to this complication. In this technique the

mid part of the tube is picked up as a loop, crushed at its base and ligated. Thus a blind loop of the tube is created with intact epithelium. By chance if such a loop continues getting vascular supply the epithelium starts functioning and its secretions start getting accumulated in the blind loop. The secretions of medial and lateral segments could be drained into uterine cavity and peritoneal cavity respectively. Therefore, Madlener's procedure appears to cause hydrosalpinx. Patients undergoing this type of operation will definitely run the risk of developing hydrosalpinx. Laparoscopic sialastic band sterilization is now becoming very popular. This technique also leaves a blind loop. Therefore, one should entertain the possibility of development of hydrosalpinx in these cases also.

Primary intention of this paper is to impress that post-sterilization abdominal pain could be due to development of hydrosalpinx. Such cases should not be ignored as psychic cases. Prompt recognition and hydrosalpingectomy will be the appropriate measure to relieve the patients from abdominal pain.

References

1. Grayburn, R. W.: J. Obstet. Gynec. Brit. Emp. 65: 460, 1958.

See Figs. on Art Paper I