HYDROSALPINX FOLLOWING TUBAL LIGATION

by

S. D. SHINDE,* M.B.B.S.,

MALINI A. DESHMUKH,** M.D.

and

SHOBHA J. JOGLEKAR,*** M.D.

Introduction

In an effort to control the population explosion sterilization of the female by tubal ligation has become one of the most widely accepted, safe and effective procedure. It is now one of the most common obstetrical operations.

This study pertains to a not very uncommon sequelae/complication of tubal ligation i.e. hydrosalpinx whose incidence is reported to be as high as 7.8% by some authors.

Material

During the period January 1974 to September 1974, in one of the units of K. E. M. Hospital, Bombay, we had an opportunity to study the uteri and its adnexa in 100 cases who had undergone major surgery for gynaecological disorders. It was observed that 19 out of these 100 patients had been sterilized by tubal ligation in the past.

Twelve out of these 19 had developed hydrosalpinx at the site of tubal ligation. Two of these 12 were brought to the hospital with acute abdomen and were found to have twisted hydrosalpinx on exploration.

Case 1

Mrs. S. R. aged 35 years 5th para with a history of puerperal sterilization done 8 years ago came to the hospital with the complaints of pain in the lower abdomen and vomiting for 3 days. Pain was mild to begin with but severe on the last day.

On examination the general condition of the patient was good. Her pulse rate was 96 per minute and the blood pressure was 120/80 mm of Hg. Patient had no pallor, oedema or cyanosis. Her respiratory and cardiovascular systems revealed no abnormality clinically.

On abdominal examination there was marked tenderness in lower abdomen, more on the left side. There was no guarding or rigidity. On vaginal examination the uterus was of about 6 week size with restricted mobility. The right fornix was clear but on the left side there was a tender mass about 3″ x 2″ x 2″ in size. This mass was firm in consistency, of smooth surface and had restricted mobility. Cervical movements were not tender. Clinical diagnosis of tubo-ovarian mass was made and she was investigated.

All the investigations of blood, urine and stool were within normal limits. Patient was explored on the next day. On opening the abdomen a mass was seen in the left tube in its middle third. It was about 3″ x 2″ x 2″ in size, dark brown in colour because of haemorrhage and firm in consistency. The mass had undergone 3 twists around its pedicle. There were no adhesions. Left-sided total salpingectomy was done. The ovary was normal

*House Officer.

**Hon. Associate Professor of Obstetric and Gynaecology.

***Hon. Professor of Obstetric and Gynaecology, Department of Obstetric & Gynaecology, K. E. M. Hospital, Bombay-400 012.

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in appearance and was retained. Right tube showed evidence of tubal ligation in its middle third. Patient was discharged on the 10th post-operative day. The histopathological examination confirmed the diagnosis of hydrosalpinx with haemorrhage.

Case 2

Mrs. R.P. Aged 27 years 5th Para with history of tubal ligation 4 years ago came with the complaints of pain in the abdomen of acute onset. Her last menstrual period was 9 days ago. She gave history of vomiting only once at home.

On examination, patient was in good general condition, her pulse rate was 86 per minute and blood pressure was 100/70 mm of Hg. Respiratory and cardiovascular systems were clinically normal. On abdominal examination there was marked tenderness in the lower abdoment without any guarding or rigidity. On vaginal examination a mass was felt in the right fornix which was about 2½" diameter, firm and tender with restricted mobility. The uterus was of normal size, smooth and firm but with restricted mobility. The left fornix was clear. A diagnosis of tube-ovarian mass was made.

The patient was investigated prior to exploration. Blood, urine, stool, X-Ray chest and ECG were within normal limits.

On opening the abdomen right tube showed in its middle third a twisted hydrosalpinx—this twisted mass found to be adherent to the tip of the appendix and also to appendices epiploicae of the ascending colon. Total salpingectomy on the right side with appendicectomy was done. On the left side there was a small silent hydrosalpinx which was also removed. Patient had an uneventful postoperative period, and was discharged on the tenth day. Histological examination confirmed the diagnosis of hydrosalpinx.

The other cases which had silent hydrosalpinx are presented in Table I.

Discussion

In our study we have tried to focus the attention towards the development of hydrosalpinx following tubal ligation, though this is not the only complication. The type of operation done in these cases is also not known. It is not a follow up of a group which has undergone sterilization but rather a study of patients who attended the hospital for gynaecological disorders and had to undergo major surgery. The interval between the sterilization and the present operation was above 15 years in 3 cases while the minimum interval was 1¼ years.

Our series though small points to a fairly high incidence of hydrosalpinx following tubal ligation. It is also interesting to note that two of these cases presented as acute abdomen and were found to have twisted hydrosalpinx on exploration. The incidence of hydrosalpinx following sterilization has been reported 5% by Gun (1972). However, Pandit (1961) in his series of cases found no cases of hydrosalpinx. Bland Sutton in 1890 re-

TABLE I

Size of hydrosalpinx	No. of cases	Chief complaints		Associated complications
		Menorrhagia	Dysmenorrhoea	
1 Cm. to 4 Cm.	4	6	2	Adhesions with omentum in two cases
4 Cm. to 8 Cm.	2	1	1	Twisted hydrosalpinx in one case
8 Cm. and above	2	1	1	Incisional hernia in one case Twisted hydrosalpinx in one case

ported the first case of torsion of the hydrosalpinx and since then these cases have been reported with fair regularity.

There are various means by which one can attempt to reduce the incidence of hydrosalpinx. The former practice of ligating the fimbrial end has been completely given up as such a practice predisposes to the formation of hydrosalpinx even without infection.

Similarly the practice of taking a safety stitch is also responsible for some of the cases of hydrosalpinx. If the safety stitch is taken too far away from the main stitch it is very likely that the small segment of the tube which gets occluded on both the ends becomes a hydrosalpinx. It is, therefore, advisable that the safety stitch be avoided altogether or should be taken only a couple of milimetres away from the first stitch.

Newer methods like application of Tentalum clips or laparoscopic electrocoagulation of the tubes may also reduce the incidence of hydrosalpinx. Another point that may be observed from this study is that 7 patients had menorrhagia as their chief complaint. Dawn (1966) suggests that it is probably pelvic adhesions and hydrosalpinx at times silent that are responsible for profuse menstruation rather than ovarian ischemia. Our study lends support to this view.

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