A ONE TIME LAPAROSCOPIC PROCEDURE FOR EVALUATION OF INFERTILE WOMEN

by

(Mrs.) M. L. Sholapurkar
(Mrs.) S. P. Sardesai
and
A. J. Nalgirkar

SUMMARY

One hundred cases of infertility, (74 of primary and 28 of of secondary) were studied by laparoscopy. In 42% cases of primary and 41% cases of secondary infertility, no obvious causes was found.

Introduction

Laparoscopy is specifically indicated in infertility and amenorrhoea cases for varifying tubal patency and assessment of adhesions, pathology of fibrimal end and detection of congenital anomalies of uterus and ovaries. Retroversion can be corrected in some cases.

Aims and Objects

The aim of the present study was to evaluate the advantages and limitations of the laparoscopy for investigating cases of infertility.

Material and Methods

Diagnostic laparoscopy was done on 100 cases of primary and secondary infertility who reported to our unit during the period 1-8-81 to 30-6-83. This one time procedure included (i) diagnostic laparoscopic examination, (ii) chromopertubation for patency of the tubes (iii) curettage and histopathological examination of endometrium.

The procedure was planned in the menstrual cycle at a time when patient was expected in a post-ovulatory phase as indicated from the menstrual history (roughly 6-8 days prior to expected period).

When amenorrhoea was 6 weeks or more pregnancy was excluded by clinical examination and pregnancy test.

The husband's semen report was confirmed to be within normal limits before the woman was subjected to laparoscopic examination.

Routine investigations as hemoglobin percentage, screening chest and urine examination for Alb. and sugar was done on every patient.

Patients with cardio-respiratory diseases, very obese patients, patients with palpable pelvic masses, fixed retroversion and patients with previous operation scars were excluded from the study.

Laparoscopy was done under neuroleptoanalgesia and local 1% xylocaine infilteration and curettage under para/peri

From: Deptt. of Obstet. and Gynec., Dr. V. M. Medical College, Solapur.
Accepted for publication on 22-8-83.

cervical block with 1% xylocaine injection. As was used for pneumoperitonium.

Results

As seen from Table I, 51% patients had normal regular menstrual cycle. 13% had very scanty though regular periods. In the rest 30% cases there was polymenorrhoea, oligomenorrhoea or secondary amenorrhoea of 2-3 months.

vaginal manipulation in 62 out of 76 primary infertility and 21 out of 24 cases of secondary infertility cases i.e. total 83% of cases.

As seen in Table II in 17% cases uterine pathology was noted. Uterus could not be moved freely in 4 cases because of bands of adhesions in the pouch of Douglase, and pelvic adhesions were also present in 2 cases. In 1 case the appearance was

TABLE I

Type of Menstrual Cycles in the Cases of Primary and Secondary Infertility in the Series

Type of menstrual cycle	No. of cases of primary infertility	Percentage	No. of cases of secondary infertility	Percentage	Total
(a) Regular moderate/painless/painfull cycles 3-4/28-30	39	51.31	12	50	51
(b) Regular scanty period 1/28-30	9	11.84	4	16.6	13
(c) Polymenorrhagia 4-7/10-14	8	10.52	2	8.3	10
(d) Oligomenorrhagia 4-8/45-90 days	14	18.42	5	20.8	19
(e) Secondary amenorrhoea 3-4 months	6	7.9	1	4.1	7
	76	100	24	100	100

Out of the 100 cases selected, only 6 cases had clinically detected pelvic pathology such as retroverted uterus not freely mobile, a small mass (less than 1") palpable in one of the fornices or a suggestion of doughy abdomen. All other cases did not reveal any obvious pathology on clinical examination.

Laparoscopic Examination

Uterus: Out of 100 cases uterus was normal in size and moved freely on

that of plastic peritonitis suggesting tuberculosis. Tubercles were seen on visceral peritoneum.

Tubes: Both tubes looked normal in 61 out of 76 cases of primary infertility and 16 out of 24 cases of secondary infertility.

In 23% cases, tubal pathology as mentioned in Table II was noticed. Fimbrial ends of the tubes could not be seen in 1 case where tubes were burried in adhesions. A small T.O. Mass was seen at

TABLE I

Condition of Uterus Tubes and Ovaries as Seen Through Laparoscope

Type	Primary infertility No. of cases	Percentage	Secondary infertility No. of cases	Percentage	Total	
(a) Uterus normal size mobile	62	81.5	21	87.5	83	83
(b) Bulky uterus	2		1			
uterine fibroid	2					
(c) Hypoplasia/ small uterus	5	18.5	—	12.5	17	17
(d) Fixed retroverted uterus	4					
(e) Unicornuate uterus	1		2 —			
Total	76		24	100	100	100
Tubes						
(a) Both normal looking tubes	61	80.2	16	66.66	77	77
(b) Thickened tubes	3		1			
(c) Tubes burried in adhesions/Peritubal adhesions	2		2			
(d) Hydrosalpinx one or both sides with bands of adhesions	8	19.8	3	33.3	23	23
(e) Glueing of fimbrial end	2		1			
(f) Tubercles on surface	2		1			
Total	76	100	24	100	100	100
Ovaries:						
(a) Both normal	66	86.8	20	83.3	86	86
(b) Smaller than normal	4		—			
(c) Sacrified and systic. with/without Periovarion adhesions	4	13.2	3	16.7	14	14
(d) Cyst on ovary	2		1			
Total	76	100	24	100	100	100

Fambrial end in one of the cases. In 1 case tubercles were seen on the surface of the left tube. (Patency was found unaffected on chromopertubation).

Ovaries: Out of 100 cases, in 66 cases of primary infertility and 20 cases of secondary infertility ovaries looked normal. Sclerocystic disease of the ovary was suggested in 3 cases, while in other 3 cases besides cyst on the ovarian surface, periovarian adhesions were also present. Ovarian cyst (containing clear fluid) about 2-3 cm. diameter were seen in 2 cases. In 2 cases ovary was part of a small T.O. mass.

Chromopertubation: As seen from Table III both tubes were found patent in 49 out of 76 cases of primary infertility and 14 out of 24 cases of secondary infertility i.e. total 63 or 63%. One tube was patent in 11% of cases. In 2 cases the dye coming out of the fimbrial end was not seen. A bluish tinge on ovarian surface and collection (pool) of dye in the pouch of Douglas suggested one tube being patent.

Both tubes were blocked in 20% of cases. Test was not done in 1 case where tube was buried in adhesions, and fimbrial ends on both sides were not visualised and D.P. was obliterated by bands of adhesions.

In 3 cases there was perforation by sound or the patency test cannula and chromopertubation was not done. In 1 case external os was pin point and cannula could not be introduced. Regurgitation of the dye occurred in 1 case of secondary infertility. The cervix was torn but the possibility of cornual block was not ruled out (later HSG was done in this case).

Summerizing the findings there was no pelvic pathology in 52 out of 76 cases of primary infertility and 16 out of 24 cases of secondary infertility, while some pelvic pathology as detected on laparoscopy was present in 24 cases of primary infertility and 8 cases of secondary infertility (32%) as seen from Table IV.

Discussion

In present series pelvic organs were found normal in 68.4% of primary infertility and 66.6% of secondary infertility cases.

Thankam Varma (1978) reported normal pelvic organs in 62 out of 98 (66.7%) primary infertility cases and 40 out of 76 (52.6%) secondary infertility cases.

TABLE III
Results of Chromopertubation

Results of Chromopertubation	No. of cases of primary infertility	%	No. of cases of secondary infertility	%	Total	%
Both tubes patent	49	64.47	14	58.3	63	63
Only right/left tube patent	8	10.5	3	12.5	11	11
Both tubes blocked	15	18.42	5	20.8	20	20
Could not be done/ Not done	4	6.5	2	8.33	6	6
Total	76	100	24	100	100	100

TABLE IV

The Assessment of the Cases Included in Series for Laparoscopy, Chromopertubation and Endometrial Biopsy Done as one Time Procedure

	Primary infertility	Secondary infertility
a. Total No. of cases investigated	76	24
b. No. of cases from (A) with normal uterus and adnexa	52	16
c. No. of cases from (B) with positive chromopertubation	43	15
d. No. of cases from gr. (C) showing evidence of ovulation	32	10
e. Percentage	42%	41%
f. No. of cases reported pregnancy	8	1

TABLE V

Agewise Distribution of Infertility Cases

Tge	Below 20 yrs.	Yrs. 21-25	Yrs. 26-30	Yrs. 31 & more	Total
No. of primary infertility	25	33	16	2	76
No. of secondary infertility	1	13	7	3	24

TABLE VI

Period of Infertility of Cases in the Series

Period	Less than 5 years	6 to 10 years	11 years & more	Total
No. of cases of primary infertility	44	28	4	76
No. of cases of secondary infertility	9	12	3	24

Padma Rao (1972) reported normal pelvic organs in 50% of the cases out of 30 studied.

In this series, pelvic tuberculosis was found in 3 out of 100 cases and endometriosis in none (enlarged uterus and menorrhagia was suggestive of adenomyosis in 1 elderly patient).

Merchant and Nariani (1978) reported 2 cases of endometriosis out of 66 cases of infertility.

Table IV shows the results of this one time procedure for evaluation of infertility. Case by (i) visualization of pelvic organs, (iii) patency test by chromopertubation, (iii) D. & C. and histopathological study of endometrium for evidence of ovulation.

It is seen that pelvic organs were normal in 68% cases (Primary 52 + Secondary 16). Out of these 68 cases both tubes were patent in 58 cases (43 + 15) i.e.

85.2%. Study of endometrium revealed evidence of ovulation in that cycle in 42 out of 58 cases or 72.4%.

Over all out of 100 cases, in 42% primary and 41% secondary infertility cases no obvious cause was found to prevent pregnancy. 8 cases of primary infertility and 1 case of secondary infertility have reported pregnancy till date. (One patient has delivered full term baby).

Two patients with primary infertility and 3 cases of secondary infertility were 31 years or more in age. It is seen that majority of the cases (44) of primary infertility reported within 5 years fifty-eight out of 76 patients of primary infertility and 14 cases of secondary infertility were below 25 year

Acknowledgement

We are thankful Dean, V.M. Medical College, Solapur, for allowing us to use the hospital data and publish this paper.

References

1. Marchant, R. and Nariani, C.: J. Obstet. Gynec. India. **28**: 387, 1978.
2. Rao, P.: J. Obstet. Gynec. India. **94**: 136, 197.
3. Thankam, V. and Harry, M.: J. Obstet. Gynec. India. **28**: 128, 1978.