DIAGNOSTIC LAPAROSCOPY IN GYNAECOLOGIC DISORDERS

DILIP K. CHAKRABORTTI • SWAPAN K. KOLE

SUMMARY

Five hundred and eighteen diagnostic laparoscopies were performed during the period from 1984 to 1988. Indications were infertility 70% cases, menstrual, abnormality 17.3%, obscure pelvic mass 4.6%, lower abdominal pain 5.6% and other indications in 2.5% of the cases. Tubal factor was responsible for 39.0% of the patients with unexplained infertility. Mullerian agenesis and gonadal dysgenesis were the common findings in patients with primary amenorrhoea. Clinical diagnosis of obscure pelvic mass and ectopic pregnancy were wrong in 37.5% and 40.2% cases respectively. Laparoscopy is a must before tubal recanalization for proper assessment regarding suitability of operation.

Introduction

Laparoscopy is now an important diagnostic tool in gynaecology and is becoming popular day by day.

A review and analysis of all diagnostic laparoscopies performed in last five years were done to evaluate the merits and demerits of this modern diagnostic parameter.

Materials and Methods

A total of 518 diagnostic laparoscopies were performed during the period from January 1984 to December 1988. History taking, clinical examination and routine investigations were done in the standard protocol. On the basis of the preliminary survey a provisional diagnosis was made in each case. When the pathology was suspected to be in the depth of the pelvis involving the ovaries, fallopian tubes, outer surface of uterus, uterosacral ligaments, or the pelvic peritoneum the patients were subjected to laparoscopy.

Single puncture laparoscopy under general anaesthesia (with cuffed intubation) was performed in most of the cases. Double puncture procedure was performed in selected cases. In a preliminary survey, patients with severe heart and lung diseases, ugly lower abdominal scars, extreme obesity and palpable lump in the lower abdomen were eliminated from the procedure to avoid complications.

Observations and Discussion

Laparoscopy was done for various

Eden Hospital, Medical College, Calcutta.
Accepted for publication on 23/1/1990.

indications - infertility 362 (70.0%) cases (primary infertility 245 (67.7%) and secondary infertility 117 (32.3%) cases), menstrual abnormality 90 (17.3%) cases, abnormal pelvic mass 24 (4.6%) cases, pain in lower abdmen 29 (5.6%) cases and other rare indications like hirsutism 6 (1.15%) cases, evaluation of tubal conditions prior to recanalization operation 6 (1.15%) cases and abnormal mass in the vagina (suspected uterine inversion) in I (0.2%) case. By far infertility is the commonest indication of diagnostic laparoscopy. In Chang et al's (1987) series 68.1% of all diagnostic laparoscopies were performed for infertility.

Before laparoscopy, tentative diagnosis was possible in 332 (64.0%) cases and etiology remained unidentified in 186 (36.0%) cases.

Laparoscopy confirmed previous diagnosis in 315 (60.6%) cases, corrected wrong diagnosis in 17 (3.4%) cases, revealed unsuspected etiology in 65 (12.5%) cases and was not helpful in 121 (23.4%) cases. In one case the procedure was abandoned because of extensive adhesions. Wrong diagnoses were mostly tubal block, tubo-ovarian mass and ectopic pregnancy. Pelvic adhesions, endometriosis, polycystic ovary (PCO) and genital tuberculosis were the common unsuspected pathology. Unnecessary laparotomy was avoided in 21 (4.0%) cases and indicated laparotomy was revealed in 38 (7.4%) cases.

Laparoscopic findings in cases of infertility are shown in Table I. Pelvic abnormalities were found in 78.6% of 362 infertile patients (84.5% by Chang et al 1987; 64.8% by Rajan 1988). Tubal factor was the commonest cause of infertility, responsible for 140 (39.0%) cases (35.4% by Bhatnagar et al 1984). Tubal block was mostly associated with hydrosalpinx, tubo-ovarian mass and tubercular salpingitis. Isolated bilateral tubal block diagnosed by HSG was proved to be false by laparoscopy in 6 cases. Genital tuberculosis was found in 8.3% cases. It was diagnosed by thickened straight tubes with negative chromopertubation or caseating foci over the tubes with or without hydrosalpinx and peritubal adhesions. In 21.4% cases there was no positive pelvic finding. Out of 129 cases with unexplained infertility, laparoscopy was helpful in 50 (38.6%) cases (44% by Musich and Behrman, 1982). Common conditions diagnosed by laparoscopy were - pelvic adhesions 9.3% cases, hydrosalpinx 4.6%, PCO 6.2%, endometriosis 4.6% and pelvic tuberculosis in 1.5% cases. In PCO ovaries may not be enlarged; naturally they are missed by clinical palpation. Though the incidence of endometriosis is low is India, early cases are often missed without laparoscopy.

TABLE - I
LAPAROSCOPIC FINDINGS IN PATIENTS WITH INFERTILITY

Diseases	*No.*	*%*
Pelvic adhesions	25	6.90
Hydrosalpinx	33	9.20
T.O. Mass	62	17.20
Pelvic tuberculosis	30	8.30
Bilateral block	63	17.70
Unilat. block	*18	5.00
PCO	41	11.40
Ovarian cyst/tumor	11	3.00
Functional ovarian cyst	19	5.27
Myoma	49	13.60
Ut. malformation	2	0.55
Endometriosis	21	5.90
Clear pelvis	79	21.40

* Fimbrial phimosis in one case

Laparoscopy was done for primary amenorrhoea in 67 cases, secondary amen-

orrhoea in 16 and oligomenorrhoea in 7 cases. Out of 67 cases with primary amenorrhoea Mullerian agenesis was seen in 18 (27.0%) cases and gonadal dysgenesis in 24 (35.8%) case. In patients with developmental abnormalities degree of Mullerian agenesis was recorded. In 3 cases paired nodules were found over the unfused Mullerian ducts at the proposed sites of the uterus. They were unified and communicated with the artificial vagina during vaginoplasty; the result was rewarding in one case. Prabhu et al (1988) recorded Mullerian agenesis and gonadal dysgenesis in 28.7% and 25.7% cases respectively.

Obscure pelvic mass was the indication for laparoscopy in 24 patients. It revealed benign ovarian cyst in 5 patients, malignant ovarian tumor in 4, myoma uteri in 7, ovarian endometriosis in four, old ectopic (tubal) pregnancy in 1, tubercular hydrosalpinx in 1 and severe pelvic adhesion in 1 patient. In remaining 1 patient laparoscopic finding was inconclusive. Clinical impression was correct in 15 (62.5%) cases and wrong in 9 (37.5%) cases. Cases of ectopic pregnancy, tubercular hydrosalphinx and pelvic adhesions remained unsuspected prior to laparoscopy. Three cases of malignant ovarian tumors were presumed to be benign ones before laparoscopy. Chang et al (1987) recorded an error in prelaparoscopic diagnosis of obscure pelvic mass in 31.0% cases. Diagnosis of malignant ovarian tumor is very important for early initiation of treatment. Loffer and Pent (1974) described malignancy as one of the important indications of laparoscopy. Duignan et al (1972) found possible ovarian malignancy in 0.2% of their whole series.

Laparoscopic findings in case of lower abdominal pain are shown in Table II. Before laparoscopy subactue/old ectopic pregnancy was suspected in 12 patients and chronic pelvic inflammatory disease (PID) in 10 patients. Pain was of unexplained origin in remaining 7 cases. Laparoscopic findings were very interesting. Out of 12 suspected cases of ectopic pregnancy the suspicion was proved correct in 7 (58.3%) cases and wrong in 5 (41.7%) cases. Misleading conditions were – actue salpingitis in 1, leaking endometriosis in 1, hydrosalpinx in 2 (of which 1 was twisted) and recurrent appendicitis in 1 case. Sud et al (1987) recorded a wrong diagnosis of ectopic pregnancy in 35.1% cases. Four cases of PID were missed before laparoscopy and 1 case of suspected PID turned out to be disturbed tubal pregnancy. Among 7 cases of unexplained pelvic pain, pelvis was clear in 4 cases, PID was found in 2 cases and tubercular salpingitis in 1 case. Thus without laparoscopy, injudicious surgical intervention may result in a case requiring conservative management and vice versa – both might prove disastrous. Semm (1984) commented – laparoscopy as an accepted method for diagnosis of ectopic pregnancy.

TABLE - II
LAPAROSCOPIC FINDINGS IN PATIENTS WITH LOWER ABDOMINAL PAIN

Diseases	*No.*	*%*
Ectopic pregnancy	8	27.4
Ch. PID	13	44.8
Ac. Salpingitis	1	3.4
Endometriosis	1	3.4
Pelvic tuberculosis	1	3.4
Appendicits	1	3.4
Clear pelvis	4	13.7

In 6 cases of hirsutism, laparoscopy diagnosed 2 cases of PCO and 1 case of

solid ovarian tumor which ultimately proved to be arrhynoblastoma. Hirsutism cases need biochemical and endocrinological assessment and other biophysical parameters alongwith laparoscopy for final diagnosis.

Evaluation of tubal conditions prior to recanalization. Out of six cases hydrosalpinx in distal segments was seen in 2 cases (bilateral in 1 case in which tuboplasty was abandoned) and cystic changes in ovaries in 2 cases. In 1 case distal segment of the Fallopian tube was not found on one side.

Complications were encountered in 25 patients (48/1000) of which 2 were major ones. There was intraperitoneal haemorrhage from omentum (which was adherent to the paritis) in one case and big abdominal wall haematoma in another case - both managed surgically. Phillips (1977) in a large series encountered overall complication rate of 29/1000.

Conclusion

Laparoscopy is a reliable procedure which removes diagnostic smoke screen and improves accuracy in diagnosis of pelvic disorders. It is used to diagnose unknown problem, to follow up the course of a known disease, and to modify therapy. We share the same opinion with Golditch (1971) that laparoscopy spares many unwanted laparotomies and conversely is of value where surgical correction is possible.

References

1. *Bhatnagar, B., Ramesh, S. & Shekhawat, U.: J. Obstet. Gynec. Ind. 34:1087, 1984.*
2. *Chang, Y.S., Lee, J.Y., Moon, S.Y. & Kim, J.G.: Asia-Oceania J. Obstet. Gynec, 13:29, 1987.*
3. *Duignan, N.M., Jordan, J.A. & Coughlan, B.M.: Brit. J. Obstet. Gynec, 79:1016, 1972.*
4. *Golditch, I.M.: Fertil Steril, 22:306, 1971.*
5. *Loffer, F.D. & Pent, D. (1974): In recent Advances in Obstetrics & Gynaecology, No.12, 1977, Churchill Livingstone, pp 199.*
6. *Musich, J.R. & Behrman, S.J.: Am. J. Obstet. Gynec, 143:293-303, 1982.*
7. *Phillips, J.M.: Int. J. Gynec. Obstet, 15:157, 1977.*
8. *Prabhu, T.R.B., Sivaraman, R., Srinivason, C. & Rajarathnam, S.: J. Obstet. Gynec. Ind, 38:205, 1988.*
9. *Rajan, R.: J. Obstet. Gynec. Ind, 38:456, 1988.*
10. *Semm, K.: In Second Asian Congress of Gynaecological Endoscopy, Bombay, 1984.*
11. *Sud, K., Malan, R., Saxena, P. & Thakur, K.: J. Obstet. Gynec. Ind. 37:156, 1987.*