



STUDY OF LAPAROSCOPY CASES IN GYNAECOLOGY IN A GOVERNMENT TEACHING INSTITUTE

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ABSTRACT Today, laparoscopy is one of the most common surgical procedures performed by gynaecologists and considered as a revolution because of being safe and minimally invasive(1,2). So we revisited all cases of gynecological laparoscopic procedures performed in the past three years in a single gynaecological unit in a teaching institute.

Aim of the study was to know incidence, indications, different procedures, changing trends & complications of diagnostic as well as operative laparoscopic surgeries in gynaecology.

It was a retrospective observational study of laparoscopic surgeries performed in a single unit of department of Obstetrics & Gynaecology at a government teaching institute in western Maharashtra from 1st January 2014 to 31st December 2016

Out of 80 laparoscopy cases, majority of patients were between the age groups 20-29 years (60%) and 77% were nulliparous. The most common indication for laparoscopy in our study was infertility (47 cases) followed by ovarian masses, ectopic pregnancy and others. In 2014, there were more cases of diagnostic laparoscopy as compared to operative cases. Whereas in 2016, increase in number of operative cases as well as increase in total number of cases were observed. Minor complications like Shoulder pain, mild subcutaneous emphysema, vomiting were noted which subsided later.

Thus, laparoscopy offers unique advantages for variety of gynaecological conditions in establishing definite diagnosis & treatment in the same sitting, speedy recovery, minimal complications, less cost and shorter hospital stay.

KEYWORDS : Laparoscopy, diagnostic, operative, infertility

INTRODUCTION:

Laparoscopic surgery has revolutionised the field of gynaecological surgery. Presently, almost all gynaecological procedures can find an alternative either laparoscopic or hysteroscopic approach.

During the last 40 years, laparoscopy has evolved from a limited gynecological surgeries used only for diagnosis and tubal ligations to a major surgical tool used for a multitude of gynecologic and nongynecologic indications. Today, laparoscopy is one of the most common surgical procedures performed by gynaecologists and it is considered as a revolution because of being safe and minimally invasive(1,2). Approximately 80% of all gynaecological surgical procedures can be done laparoscopically.⁽⁴⁾

Due to these rapid advancements in the pace of surgical skills in laparoscopy, we revisited all cases of gynecological laparoscopic procedures performed in the past three years in a single gynaecological unit in a teaching institute.

AIMS & OBJECTIVES : The Aim of this study was to study the incidence, indications, different procedures, changing trends & complications of diagnostic as well as operative laparoscopic surgeries in gynaecology.

MATERIALS & METHODS:

It was a retrospective observational study of all gynaecological laparoscopic surgeries performed in a single unit of department of obstetrics & gynaecology at a government teaching institute in western Maharashtra from 1st January 2014 to 31st December 2016. Cases of laparoscopic sterilization were not included in this study. Information was retrieved from patients' case records, theatre registers. All data relating to age, parity, indication, procedure, findings, complications etc. were extracted and analysed by using simple percentage.

Preoperative evaluation was done in all cases by clinical, laboratory investigations and pelvic ultrasonography (to evaluate any pelvic pathology). Infertility cases were investigated in detail pre operatively including hormonal assay & husband's semen analysis.

Informed written consent of patient & relatives was taken in all cases. All operative and most of the diagnostic laparoscopies were performed under general anaesthesia. Spinal anaesthesia was given for some

diagnostic procedures. In cases of infertility, hysteroscopy was also performed to detect any intra uterine abnormalities. Umbilical or supra-umbilical incision was taken for 10mm primary port. Trocar & canula were introduced by direct entry method and open technique. Pneumoperitoneum was created using carbon dioxide insufflator maintaining intra abdominal pressure of 12-14 mm of Hg. Quick evaluation of whole of the abdomen was done to rule out adhesions. Accessory ports were inserted under direct vision. Energy sources like bipolar, monopolarcautery, harmonic were used for coagulation.

TABLE 1. DEMOGRAPHY

Parameter	No. of cases	Percentage	
Age group	<19	4	5 %
	20-29	48	60 %
	30-39	23	28.75 %
	40-49	4	5 %
	>50	1	1.25 %
Total	80		
Marital status	Married	77	96.25 %
	Unmarried	3	3.75 %
	Total	80	
Parity	Nulliparous	62	77.5%
	Multiparous	18	22.5%
	Total	80	

Table1: Out of 80 laparoscopy cases, majority of patients were between the age groups 20-29 years (60%) and 30-39 years (28.75%). In this study, 62 were nulliparous & 18 were multiparous.

TABLE 2. TYPES OF SURGERY

Types of surgeries	Number	Percentage
Diagnostic	48	60 %
Operative	32	40 %
Total	80	

Table 2: Diagnostic laparoscopies were 48(60%) while 32 (40%) were operative laparoscopy cases.

RESULTS: There were 1,716 major gynaecological surgeries performed during the study period.

TABLE 3. INDICATIONS OF LAPAROSCOPIC SURGERY

Indications	No.of cases	Percent
Infertility	Primary	40
	Secondary	7
Ectopic	Ruptured	2
	Unruptured	3
	Chronic	1
Ovarian masses	Simple cyst	8
	Dermoid	1
Primary Amenorrhoea	2	2.5 %
Missing Copper-T	2	2.5 %
Fibroid	4	5 %
Adenomyosis	1	1.25 %
BOH	4	5 %
DUB	2	2.5 %
Adnexal Torsion	3	3.75 %
Total	80	

Table 3: The most common indication for laparoscopy in our study was infertility (47cases) followed by ovarian masses (9 cases) , ectopic pregnancy(6 cases), adnexal torsion (3), bad obstetric history(4) , missing CuT (2).

TABLE 4. FINDINGS OBSERVED IN INFERTILITY CASES

Intraoperative findings	No.of cases
Normal	33
Tubal block	4
Polycystic ovaries	3
Uterine anomalies	6
Adhesions	7
Fibroid	6
Hydrosalpinx	1

Table 4: Out of 47 infertility cases, laparoscopic findings were normal in 33 cases. Tubal block, polycystic ovaries, mullerian anomalies, pelvic adhesions are the major abnormal findings in rest of the cases.

TABLE 5 OPERATIVE LAPAROSCOPY DONE IN INFERTILITY CASES

Surgeries done	No. of cases
Laparoscopic ovarian drilling	4
Hysteroscopic septal resection	3
Hysteroscopic tubal cannulation	1
Laparoscopic adhesiolysis	1

Table 5: Operative hysterolaparoscopy was performed in 9 infertile patients like polycystic ovarian drilling (4 cases), hysteroscopic septal resection (3), adhesiolysis (1), hysteroscopic tubal

TABLE 6. LAPAROSCOPY IN NON-INFERTILITY CASES

Surgeries done	No.of cases
Ovarian cystectomy	9
Total laparoscopic hysterectomy	4
Salpingectomy	3
Diagnostic Laparoscopy in primary amenorrhoea	2
Drainage of endometriotic cyst & fulgaration of endometriotic lesions	2
Detorsion of adnexa	2
Myomectomy	2
Copper-T retrieval	2
Excision of rudimentary horn ectopic	1
Laparoscopy followed by laparotomy	4

Table 6: Out of 33 non infertility cases, ovarian cystectomy was performed in 9 cases and was the most common operative laparoscopy performed in our study. Other operative procedures include 4 total laparoscopic hysterectomies, 3 surgeries for ectopic pregnancy, Drainage of endometriotic cyst (2cases), 1 excision of rudimentary horn ectopic pregnancy, 2 cases of perforated Copper-T retrieval, 1 case of detorsion of isolated fallopian tube torsion, one case detorsion of tuboovarian torsion, 2 cases of myomectomy . In our study, 4 cases were converted into laparotomy. Out of these, one myomectomy case had to be converted into laparotomy due to intraoperative suspicion of

adenomyoma leading operative difficulty which further landed up into hysterectomy. On histopathology report, it turned out to be uterine sarcoma. Second case was ovarian dermoid cyst for which laparotomy was preferred so as to avoid spillage & for better ovarian reconstruction. Third case was large paraovarian cyst with tubo ovarian torsion. In this case, detorsion was done laparoscopically but later on due to technical difficulty & bleeding, converted into laparotomy. Fourth case was unruptured tubal ectopic pregnancy in which salpingostomy& conservation of fallopian tube was the aim and cause of laparotomy.

TABLE 7. CHANGING TRENDS IN LAPAROSCOPIC SURGERIES

Year	Diagnostic	Operative	Total
2014	15 (75%)	5 (25%)	20
2015	20 (80%)	5 (20%)	25
2016	15 (42.8%)	20 (57.2%)	35
Total	50	30	80

Table 7: In 2014, out of 20 cases, 15 cases (75%) were diagnostic & 5 (25%) cases were operative whereas in 2016, out of 35 cases, 20 (57.2%) cases were operative & 15(42.8%) were diagnostic.

TABLE 8 COMPLICATIONS IN LAPAROSCOPY CASES

Complications	No.of cases	Percentage
Nil	70	87.5 %
Vomiting	2	2.5 %
Emphysema	3	3.75 %
Uretero-vaginal Fistula	1	1.25 %
Shoulder pain	4	5 %
Total	80	100%

Table 8: In 70 cases, no complications were observed. Minor complications like Shoulder pain(4 patients), emphysema (3 patients), vomiting (2patients) were noted which subsided later. One case of total laparoscopic hysterectomy developed uretero vaginal fistula after 12 days of surgery.

DISCUSSION :

This was a retrospective observational study of gynaecological laparoscopy cases operated in a single unit of OBGY department during the period from 1st January 2014 to 31st December 2016 in a government teaching institute. A total 80 cases of laparoscopy were analysed. Age group varied from less than 19 to 50 years in the study. Most of the patients were within age group of 20-29. This might be due to the fact that infertility is the most common indication of laparoscopy which is commoner in this age group. 77.5% patients were nulliparous, infertility being the commonest indication for them which is similar to the study by TchenteNguefack et al(5). Whereas in multiparous patients, the indication was gynaecological problem other than infertility. The most common indication for laparoscopy in our study was infertility followed by ovarian cyst, ectopic pregnancy, BOH and others. Infertility was the leading indication probably due to increased awareness among the population and also because it is cost effective in public sector hospitals(6). Out of 80 cases, 48 cases were diagnostic & 32 cases were of operative laparoscopy. In 2014, there were more cases of diagnostic laparoscopy (75%) as compared to operative cases. Whereas in 2016, increase in number of operative cases (57.2%) as well as increase in total number of cases were observed. This increase in trend of operative laparoscopic surgery in our study was similar to the study by Khatuja R et al & Twijnstra et al (1,7). This shift from diagnostic to therapeutic use of laparoscopy has been enabled due to upgradation of better operative equipments in government teaching institutes and increase in skill of the surgeons.

Out of 32 operative laparoscopy cases ,other than fertility enhancing surgeries (done in 9 cases), variety of operative cases have been observed starting from ovarian cystectomy, salpingectomy for ectopic pregnancy till rudimentary horn excision, adnexal detorsion and total laparoscopic hysterectomy. Though the number of total laparoscopic hysterectomies is less in this study, the changing trend definitely shows the keenness of doctors and supporting staff to learn the advanced techniques for more indications for laparoscopy; which is also observed in another study(6). The basic advantage of laparoscopy is mainly diagnostic as well as therapeutic in the same sitting, especially in cases of infertility, ovarian cyst, endometriosis etc.

Major complications were not seen except one case of uretero vaginal fistula following total laparoscopic hysterectomy. Shoulder pain , vomiting, emphysema observed in some cases were for shorter period which subsided before discharge.

The limitation of our study is being retrospective and done in a single unit of OBGY department.

CONCLUSION:

Laparoscopic surgery offers unique advantages for variety of gynaecological conditions in establishing definite diagnosis & treatment in the same sitting, speedy recovery, minimal complications, less cost and shorter hospital stay. Thus laparoscopic surgery is an economically feasible option nowadays. So laparoscopy should become an integral part of postgraduate training in medical colleges for better management of patients at all levels.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests regarding the publication of this paper.

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