



ROLE OF LAPAROSCOPY IN CHRONIC PELVIC PAIN

Obstetrics and Gynaecology

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ABSTRACT

Background/ purpose: The purpose of the present study was to evaluate the role of laparoscopy in diagnosis the cases of chronic pelvic pain.
Methods: This prospective study was conducted among 100 women who had been suffering from chronic pelvic pain for ≥ 6 months at Department of Obstetrics & gynaecology, Muzaffarnagar Medical College, Muzaffarnagar from December 2017 to December 2018. After proper selection of cases, a detailed history followed by general, systemic and pelvic examination, diagnostic laparoscopy of the patient was done and noted as per the following protocol. Diagnostic laparoscopy was performed under general anaesthesia using a 5-mm Karl Storz 30° angle double port laparoscope. The data was collected and subjected to statistical analysis using SPSS version 22.00
Results: Majority (70%) of patients with CPP were in the age group between 26 – 30 years and 31 – 35 years. Two most common causes of CPP detected clinically were endometriosis and chronic PID which together constituted about 56% of the cases with CPP in our study group. Laparoscopy findings revealed that 90% of patients with CPP have one or more positive findings, the commonest being endometriosis in various pelvic sites with or without endometrioma (34%)
Conclusion: It can be concluded that ideally laparoscopy should be performed simultaneously to identify intrauterine pathologies, which can be associated with CPP and which are missed by laparoscopy. Hence combined laparohysteroscopy is the ideal method for diagnosis of CPP.

KEYWORDS

Chronic pelvic pain, Laparoscopy, Endometriosis

INTRODUCTION:

Chronic Pelvic Pain (CPP) is best defined as intermittent or constant pain of at least 6 months' duration, localised to pelvis or lower abdomen below the line joining the two anterior- superior iliac spines, not occurring exclusively with menstruation or intercourse and not associated with pregnancy¹. Chronic Pelvic Pain is a common complaint met in day to day gynaecological practice². Various forms of CPP affect 12% to 15% of women in the United States. About 12% of hysterectomies are performed for pelvic pain, and 30% of patients who present to pain clinics have already had a hysterectomy. Their marital, social and occupational lives are often disrupted. Living with any chronic pain carries a heavy economic and social price¹.

It becomes important to diagnose this problem at the earliest. The diagnosis can be made by MRI, CT and USG. CT utilises radiation in imaging which limits its use in certain conditions. MRI provides excellent image of pelvic organs and is safe from the point of radiation hazards, but it is expensive and not widely available in a country like India. Though there are recent advances in technology of USG like superior resolution, 3-D imaging, doppler method etc.^{3,4} in many cases of CPP ultrasonographic evaluation is still not adequate and informative.

Diagnostic laparoscopy has been regarded in the past as the 'gold standard' in the diagnosis of CPP. It may be better seen as a second line of investigation if other therapeutic interventions fail. It is the only test capable of diagnosing peritoneal endometriosis and adhesions⁵. But still there is lack of literature available on the same. Hence the present study was conducted to evaluate the role of laparoscopy in diagnosis the cases of chronic pelvic pain.

MATERIAL AND METHOD:

This prospective study was conducted at Department of Obstetrics & gynaecology, Muzaffarnagar Medical College, Muzaffarnagar, Uttar Pradesh from December 2017 to December 2018. A total of 100 female subjects were recruited from Gynae OPD, who had been suffering from chronic pelvic pain for ≥ 6 months and was examined clinically and then subjected to laparoscopy. The study was initiated after obtaining ethical clearance from the ethical clearance committee of the institution and after taking written informed consent from the patient. Inclusion criteria of the subjects were: a. Women age 20-45 years, b. Patients with pelvic pain of more than 6 months, c. Pain not associated with menstruation or sexual intercourse and Patients not responding to

medical therapy. Inclusion criteria of the subjects were: a. Pregnancy, b. Patients with morbid obesity, c. Patients with severe hypertension, diabetes mellitus, coronary artery disease, acute bronchiolitis, chronic obstructive lung disease, systemic and cardiac illness, bleeding disorders, peritonitis, intestinal obstruction, d. Patients with no obvious abdomino-pelvic lump, e. Patients with previous history of hysterectomy, f. Patients with previous history of multiple surgeries, g. Patients with orthopaedic/musculoskeletal pathology, h. Patients with abdominal pain less than 6 months and i. Patients in whom general condition was not stable.

After proper selection of cases, a detailed history followed by general, systemic and pelvic examination, diagnostic laparoscopy of the patient was done and noted as per the following protocol. The patients having more pain or serious or have come from distant places or divisions were admitted and complete workout was done in a stepwise manner. Demographic information of subjects were recorded such as name, age, religion, address, occupation, duration of marriage, years of exposure, sexual partners, parity and socio-economic status. Presenting complaints, obstetrical history, history of contraception, menstrual history as well as past medical history was recorded too. Gynecological examination included inspection of vulva and perineum, Speculum examination of cervix and vagina, bimanual examination to assess the shape, size, direction, mobility of uterus and adnexa, mass and tenderness of urethra, vaginal fornix and cervical motion tenderness.

Investigations including Complete blood count, Urine routine and microscopic, Urine culture and sensitivity, Coagulation Profile, Liver function test, Kidney function test, Chest x-ray, Electrocardiogram, transvaginal ultrasound, Cancer antigen-125, Lactic dehydrogenase, β Human chorionic antigen, Carcino embryonic antigen were done if required. Diagnostic laparoscopy, chromopertubation when associated with infertility, dilatation and curettage (D&C) along with endometrial biopsy in cases of infertility /suspected TB/suspected malignancy was done in the secretory phase of the cycle when D & C is planned along with diagnostic laparoscopy.

Diagnostic laparoscopy was performed under general anaesthesia. A 5-mm Karl Storz 30° angle double port laparoscope was used. Carbon dioxide pneumoperitoneum was accomplished with a 15-gauge Verres needle. When manipulation of the pelvic organs was required for improved visualization, a second puncture site was established lateral

to left rectus muscle under vision taking care to avoid injury to inferior epigastric artery. A third port was established similarly on right side whenever an operative procedure was undertaken such as, fulguration, adhesiolysis and cyst wall puncture. Under surface of liver and diaphragm was always inspected for adhesions before completing procedure.

Statistical Analysis:

Data so collected was tabulated in an excel sheet, under the guidance of statistician. The means and standard deviations of the measurements per group were used for statistical analysis (SPSS 22.00 for windows; SPSS inc, Chicago, USA).

Results:

Majority (70%) of patients with CPP were in the age group between 26 – 30 years and 31 – 35 years, which means CPP found commonly in young and sexually active women in our study group. (46% of patients with CPP in our study were nulliparous followed by primiparous patients (36%). 18% patients were multipara. So, most of the patients were either nullipara or primipara (table 1).

Two most common causes of CPP detected clinically were endometriosis and chronic PID which together constituted about 56% of the cases with CPP in our study group. Two patients, detected clinically as a case of recurrent appendicitis, kept in the study because of her ultrasound scan suggestive of gynaecological origin of CPP (table 2).

Laparoscopy findings revealed that 90% of patients with CPP have one or more positive findings, the commonest being endometriosis in various pelvic sites with or without endometrioma (34%) suggesting increased incidence of endometriosis in our society due to delay in age of marriage and first conception. The actual incidence of adhesions was much higher as some cases of endometriosis, chronic PID, tuberculosis and residual ovarian cyst were associated with different degrees of adhesion. If we have taken all causes of adhesions together, then it would be the commonest finding laparoscopically (table 3).

DISCUSSION:

Laparoscopy as a diagnostic tool is more informative as it can assess as yet hidden pathologies like peritoneal factors in addition to those arising from uterus, tubes and ovaries. In this study an attempt has been made to assess women with CPP by clinical and laparoscopic methods and study the various factors contributing to CPP as well as compare the two methods in respect to their specificity of diagnosing CPP.

In our study parity was somewhat towards lower side as the patients of CPP with associated primary or secondary infertility consented more readily for diagnostic laparoscopy for their fertility problems rather than CPP. An interesting finding by Papathanasiou K et al⁵ (1999) was that pelvic congestion is a common finding in women with CPP especially in multigravidas, for which they suggested laparoscopic resetting of uterus. In a study by Zubor P et al⁶ (2005) on 'Laparoscopy in CPP', the mean parity of the study group was 1.6, ranging from 0-5.

In the present study, clinical findings revealed that most common causes of CPP diagnosed clinically were endometriosis and chronic PID being 28% each and together constituting 56% of total cases. Bimanual pelvic examination only detected endometriosis in 53% of cases in a study by Nezhat C et al⁷ (1994) on 'Comparison of TVS and bimanual pelvic examination in patients with laparoscopically confirmed endometriosis'. According to the study by Kamilya G et al⁸ (2005) clinically diagnosed chronic PID was present in 26% and endometriosis in 10% of patients in their study. Hence my study tallies more or less with study by Kamilya G et al⁸ in detection of chronic PID by clinical methods only.

Laparoscopic findings showed that 34 patients out of 100 (34%) came out to be suffering from endometriosis in various pelvic sites. Only postoperative adhesions without any other pathology were found in 12% cases. If all causes of adhesions are taken together in consideration, then adhesions were the commonest (50%) laparoscopic finding which was responsible for CPP in our study and which tallies with the findings of Gizewski J et al⁹ (1992), Marana R et al¹⁰ (1993), Bojahr B et al¹¹ (1995) and Gowri V et al¹² (2001). 10% of patients detected to have normal pelvis. Other pathologies detected by laparoscopy were pelvic/abdominal tuberculosis (12%), chronic PID (6%), fibroid uterus (10%), adenomyosis/bulky uterus (6%), pelvic congestion (6%), ovarian cyst (4%), fimbrial cyst (4%), polycystic

ovary (4%), residual ovarian cyst (4%), solid ovarian tumour (2%), uterine anomaly (2%) and appendicitis (4%). There was considerable overlapping of findings.

A study by Cheong Y et al¹³ (2006) stated that common pathologies associated with CPP detected laparoscopically are endometriosis (33%) and adhesions (24%). In a study by Milingos S et al¹⁴ (2006), it has been stated that at laparoscopy 76.7% of patients with CPP were found with pelvic pathology. Omental – abdominal wall adhesions, advanced endometriosis, endometriomas with adhesions, pelvic venous congestion, and hydrosalpinges with pelvic adhesions were significantly more frequent in cases with CPP. In a study by Metter L et al¹⁵ (2007), among the patients undergoing laparoscopic procedure and detected to have pelvic or abdominal adhesions, 30.5% were admitted with the main complaint of CPP. In a study by Kang SB et al¹⁶ (2007), pelvic endometriosis was the most common (60.2%) laparoscopic finding in patients with CPP, followed by normal pelvic findings (21.2%) and pelvic congestion (13.0%).

No serious complications were encountered in the patients included in the present study. Due to pneumoperitoneum mild chest pain, abdominal pain occurred in a few cases. Extraperitoneal insufflation occurred in 2 cases.

CONCLUSION:

It can be concluded from the results of present study that laparoscopy can be considered as gold standard investigation for evaluation of patients with CPP as it enables not only confirmation of clinical findings but also detects causes of pain in many, where these two procedures fail, eg. peritoneal endometriotic deposits, adhesions or pelvic congestion. Ideally hysteroscopy should be performed simultaneously to identify intrauterine pathologies, which can be associated with CPP and which are missed by laparoscopy. Hence combined laparohysteroscopy is the ideal method for diagnosis of CPP.

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