Laparoscopic Evaluation of Chronic Pelvic Pain

S M FAROOK

Department of Surgery, Liaqat Medical College, Hyderabad.

Correspondence To : Dr Shaista M. Farook, Assoc. Prof. Surgery, Liaqat Medical College, Hyderabad..

Chronic pelvic pain is a common disorder seen in daily gynaecological practice. A retrospective study was carried out at Liaqat Medical College Hospital, Hyderabad from 1st June 1996 to 31st May 1997, to evaluate the causes of chronic pelvic pain suing laparoscopy. During this period a total of 36096 patients attended the outpatient gynaecological and obstetrical clinic, 556 patients presented with chronic pelvic pain. One hundred and fifty patients were evaluated by diagnostic laparoscopy. Adhesions of varying severity were found in 51(34%) patients., 15 patients (10%) had endometriosis, chronic pelvic inflammatory disease was found in 9(6.8%) patients. Seventy patients (46.66%) showed no abnormal findings.

This study emphasizes the importance of laparoscopy in evaluating the causes of chronic pelvic pain. This procedure should be considered an essential investigation in the management of such patients so that repeated and unnecessary use of antibiotics and other drugs could be avoided.

Key Words: Chronic Pelvic Pain, Laparoscopy

Chronic pelvic pain may be defined as non-menstrual pain of three or more months duration that localizes to the anatomic pelvis and is severe enough to cause functional disability and require medical or surgical intervention.

Chronic pelvic pain is very common and perplexing problem especially in women of the reproductive age. Approximately one third of the patients attending the gynaecological clinic present with pelvic pain as their major or significant symptoms[1,2].

Laparoscopy as a diagnostic and therapeutic modality now occupies a prominent place in gynaecological practice. One area where it has assumed an integral role is the evaluation of chronic pelvic pain. In a survey of the gynaecological laparoscopy conducted by the Royal College of Obstetricians and gynaecologists (RCOG 1978) over 50% of the diagnostic laparoscopies were done to investigate pelvic pain[3].

Endometriosis, pelvic inflammatory disease with adhesion formation account for a small number of these patients. In very few patients pelvic pain can be attributed to non gynaecological cause such as recurrent cysto-urethritis, irritable bowel syndrome, ureteric calculus, diverticulitis, chronic ulcerative colitis or a referred pain from a lumbo sacral region. In more than half of these patients no cause of chronic pelvic pain is found and their management remains unsatisfactory.

The classical studies by Taylor[4a,b,c] in the USA and more recently by Renaer[5] have done much to characterize the condition but they fall short of convincingly demonstrating causes of chronic pelvic pain and, of even greater importance, of proposing an effective form of treatment.

Laparoscopic study by Bears[6] showed that 91d% of women complaining of chronic pelvic pain with no other pelvic pathology had dilated veins and vascular congestion in the broad ligaments and ovarian plexus

Clinical diagnoses in women with acute pelvic pain, based on history, physical examination, laboratory tests and imaging results are frequently wrong with erroneous diagnosis in 22-71%[7,8,9]. Similarly, in women with chronic pelvic pain the physical examination is not a good predictor of laparoscopic findings. Although an abdominal examination correlates in 70-90% of cases with abnormal laparoscopic findings[10,11] still more than half of those with abnormal laparoscopic findings have a normal pre-operative pelvic examination[7,11].

The purpose of this study was to evaluate laparoscopically the causes of chronic pelvic pain so that appropriate treatment could be offered to these patients and unnecessary hospital visits and repeated use of antibiotics avoided.

Patients and Methods

To determine the causes of chronic pelvic pain using laparoscopy a retrospective study was conducted at Liaquat Medical College Hospital, Hyderabad Gynaecology and Obstetric Department Unit-I from 1st June 1996 to 31st May 1997.

A total of 36096 patients attended the gynaecological and obstetrical outpatients clinic.

Five hundred fifty six patients attended the outpatients department because of chronic pelvic pain. They were thoroughly interviewed and investigated. Those patients who did not respond to symptomatic treatment were advised laparoscopy. One hundred and fifty patients consented for diagnostic laparoscopy.

All laparoscopies were performed by experienced surgeons under general anaesthesia. The technique of laparoscopy is now well known and does not need detailed description. Single puncture method was employed. A blunt probe passed via the instrument channel of the laparoscope was used to manipulate the deeper, hidden

structures like the fimbrial ends of the tubes, the posterior surface of the ovaries etc.

The examination was carried out systematically. First the anterior surface of the uterus was examined which was then anterverted to bring the posterior surface, utero sacral ligaments and the Pouch of Douglas into view. A more detailed examination was made by advancing the telescope deeper into the Pouch of Douglas to examine the uterosacral ligaments and the pelvic peritoneum. Next the ovary was examined. The medial side was inspected closely. Depending on the time in the cycle, evidence of ovulation was seen. The ovary was then lifted by placing the probe under the ovarian ligament and rolling the ovary upwards or by placing a probe under the ovaricopelvic ligament. In this way follicular cysts, corpus luteum on the lateral side were easily visualized. Spots of endometriosis and adhesions were also clearly visualized. Full length of the fallopian tube was visualized and fimbriae inspected.

Results

Five hundred and fifty six patients complained of chronic pelvic pain. One hundred and fifty patients consented for laparoscopy. Other patients backed out because of the invasive nature of the procedure, and that it was performed under general anaesthesia and required hospitalization. Other reasons for non consent were family problems, financial constraints and non-willingness of the elders of the family.

Of the one hundred and fifty patients majority (35.33%) were of 31-35 years of age. Youngest patient was 18 years old unmarried girl (Table 1).

Ninety six patients (64%) were multiparous patients and admitted taking various types of treatment for their chronic pelvic pain including vaginal use of herbal medicines from traditional birth attendants (Table II).

Table I

Nature of pain	No.	%age
20 and under	02	1.33
21-25	25	16.66
26-30	36	24.00
31-35	53	35.33
36-40	33	22.00
Above 40	01	0.66

Table II

Parity	No.	%age
Nulliparous	5402	361.33
Multiparous	9625	6416.66

One hundred and thirty eight patients (92%) were married women but were tense because of problems of joint family system. Seven (4%) were divorced and four (2.6%) were widowed. One patient was unmarried. These patients were thoroughly interviewed to identify chronic emotional disturbance or psychosocial factors in the past or present.

Table III

Nature of pain	No.	%age
Dll ache	54	36
Dull and sharp	77	51.33
Acute/severe episodes	19	12.66

Seventy seven patients (51.33%) had dull, deep pelvic pain with occasional sharp episodes. Nineteen patients (12.66%) with acute pain required hospitalization, parenteral fluids, analgesics and injectable antibiotics (Table III). Duration of pain ranged between 6 months to 2 years. Factors such as walking, standing, lifting and bending tended to exacerbate pain in majority of the patients. Lying down and analgesics tended to be helpful to most of them. About 6% needed some form of injectable analgesics for relief of pain. Stress (tension or excitement) was more often mentioned as exacerbating the pain in those patients where laparoscopy findings were negative for any pathological lesions.

Table IV

Localization	No.	%age
Right iliac fossa	28	18.66
Left iliac fossa	20	13.66
Whole lower abdomen	92	61.33
Pain moves	10	6.6

Ninety two patients (61.33%) complained of pain in the whole lower abdomen. The exact localization of pain kept on changing in ten patients (6.6%) (Table IV).

Table V

Symptoms	No.	%age
Backache	110	73.33
Vaginal discharge	70	46.66
Headache	64	42.66
Dysfunctional uterine bleeding	81	54.00
Spasmodic dysmenorrhoea	42	28.00
Congestive dysmenorrhoea	50	33.33
Dyspareunia	106	70.00
Post coital ache	99	66.00

One hundred and ten patients (73.33%) complained of backache low down in the lumbosacral region which exacerbated with work and was relatively relieved by rest (Table V). patients with vaginal discharge prior to admission to hospital were given appropriate courses of antibiotics/antifungal according to the results of culture and sensitivity of high vaginal swab.

Eighty one patients (54.00%) had dysfunctional uterine, bleeding, dyspareunia was present in one hundred and six patients and post coital ache was complained by ninety nine patients (Table V).

Table VI

Physical signs	No.	%age
Ovarian point tenderness	70	46.66
Cervix-excitation pain	69	46.00
Anteverted uterus	70	46.66
Bulky uterus	90	60.00
Tender on pressure	51	34.00
Limited mobility	24	16.00

Tenderness at the ovarian point was seen in seventy patients (46.66%). The ovarian point is an anatomical landmark situated at the junction of upper and middle thirds of a line drawn between the umbilicus and the anterior superior iliac spine. Lateral or upward movement of the cervix elicited excitation pain in cases with endometriosis and adhesions (Table VI). The position of the uterus, its size and tenderness of the utero- sacral ligaments did not prove to be useful distinguishing feature between adhesions and endometriosis.

Table VII

Laparoscopic findings	No.	%age
Dense adhesions	16	10.66
Filmy adhesions	35	23.33
Endometriosis	15	10.00
Chronic PID	09	6.8
Hyperaemia	05	3.33
No abnormal findings	70	46.66

In seventy patients (46.66%) no abnormality was detected. Filmy and dense adhesions were seen in 51 patients (34%). Varying degrees of endometriosis was seen in 15 patients (10%). Nine patients had tuboovarian masses. Only 5 patients (3.33%) showed evidence of generalized congestion of pelvic organs along with dilated vessels in the broad ligament (Table VII).

Discussion

In recent years laparoscopy has come into common use in the diagnosis of obscure pelvic disorders in women. Important indications being infertility, pelvic pain and suspected endometriosis. Many psychosomatic and functional disturbances manifest in the lower abdomen and their diagnostic differentiation from organic diseases are often in question. Laparoscopy is of particular value when the symptoms are recurrent but the physical findings are small or absent.

A survey of some of the recently published laparoscopy series suggests that over 40% of the laparoscopies were done for chronic pelvic pain and that the frequency of laparoscopy for the evaluation of chronic pelvic pain may actually be increasing. Koninckx et al[12] reported that in 1987, 17% of all their laparoscopies were for chronic pelvic pain, this increased to 24% in 1988 and to 30% in 1989. Although such an increase might be due to an increase in the prevalence of chronic pelvic pain, it is more likely because of the opinion of most gynaecologists that the "liberal use of laparoscopy is mandatory for comprehensive evaluation of the patient with pelvic pain"[13].

In women with chronic pelvic pain the physical examination is not a good predictor of laparoscopic findings. The use of laparoscopy allows the detection of potentially treatable pathology not detected by any other evaluation and conversely in other cases it may prevent inappropriate major surgical evaluation or treatment.

In our series adhesions were found in fifty one patients (34%). Women with adhesions have no preoperative findings by either history or physical examination that suggest the presence of adhesions. Presently the only definitive way to diagnose them is by surgical visualization, which is now usually done via laparoscopy instead of laparotomy.

Fifteen patients (10%) had endometriosis of varying degrees of severity. The clinical signs and symptoms that make on suspicious of endometriosis (dysmenorrhoea, dyspareunia, abnormal uterine bleeding, chronic pain, a pelvic mass, utero sacral ligament nodularity) are not reliable enough to justify diagnosis and treatment. Current thinking dictates visual and/or histologic confirmation via laparoscope before diagnosing or treating a patient for endometriosis. In our series once the diagnosis was confirmed medical treatment was commenced. Follow up after four weeks revealed marked improvement of symptoms.

Nine patients (6.8%) were diagnosed to have chronic pelvic inflammatory disease. Laparoscopy confirmed presence of tuboovarian masses. Laparotomy was performed and their masses were removed. There was no malignant change in the masses.

Five patients (3.33%) in our series were diagnosed to have generalized hyperaemia. Over the years pelvic congestion have been the most popular explanation for the pain. The dull ache, congestive dysmenorrhoea, postcoital ache and association with dilated pelvic veins support this concept. It also seems likely that numerous additional complaints of these patients such as backache, excessive vaginal discharge, deep dyspareunia, and urinary symptoms often cited as neuroticism of these women, are, in reality due to generalized pelvic congestion.

Seventy patients (46.66%) had no demonstrable pathology. This suggest atleast two specific things that the gynaecologist must recognise. First laparoscopy must not be viewed by either the patient or her physician as the final definitive test. It must be clear to the patient pre-

operatively and post operatively. That laparoscopy is one of several diagnostic modalities that are used in the evaluation of chronic pelvic pain and that it is limited to the diagnosis of several quite specific abdominopelvic diseases that cannot be diagnosed by any other method and that may be a cause of chronic pelvic pain. Second, a negative laparoscopy does not mean that these women have no physical basis for their pain. Reiter and Gambone[14] have reported that with thorough evaluation, occult somatic pathology was diagnosed in 74% of women with negative laparoscopies. Patients with negative laparoscopy in our series were reassured. They felt relieved that there was no underlying pathology especially any malignancy and were referred to psychiatrist for appropriate counselling and treatment.

One of the earliest papers to discuss psychological treatment approaches to chronic pelvic pain is that of Beard et al[15]. Although no formal outcome measures were taken, several women with pelvic pain syndrome apparently responded well to the relaxation training provided by the psychiatrist. Patients with unexplained pelvic pain often have had an unfavourable family environment in childhood and this probably leads to emotional disturbance in later life.

In our series in more than 50% patients the underlying cause of chronic pelvic pain was diagnosed with the help of laparoscopy, and definitive treatment was started.

Conclusion

Laparoscopy remains an essential part of the investigation of chronic pelvic pain because it is still the only reliable means of diagnosing abdominopelvic pathology. The high prevalence of unexplained chronic pelvic pain is a cause of concern to hospital and general practitioners because it has been so difficult to do anything to relieve the pain.

Operative laparoscopy offers a minimally invasive method to treat almost all of the abnormalities like adhesions, endometriosis, chronic PID, ovarian cysts etc. At present laparoscopy is certainly indicated when the patients chronic pelvic pain has no ready explanation, as well as laparoscopic treatment of any pathology detected. However, both physicians and patients must recognize that laparoscopy is not the ultimate evaluation, nor the panacea for chronic pelvic pain.

References

1. Morris N, O"Neil D 1958: Outpatient Gynaecology, British Medical Journal 2:1038.
2. Henker FO, 1979: Diagnosis and treatment of non organic pelvic pain. Southern Medical Journal 72:1132-1134.
3. RCOG 1978: Gynaecological laparoscopy. In: Chamberlain G, Brown JC (eds) Report of the working party of the confidential enquiry into gynaecological laparoscopy, London.
4. a) Taylor HC, 1949a: Vascular congestion and hyperaemia. 1. Physiological basis and history of the concept. Am J Obstet. Gynaecol 57:211-230.
   b) Taylor HC (1949b): Vascular congestion and hyperaemia. 11:The clinical aspect of congestion fibrosis syndrome. Am J Obstet. Gynaecol 57:637-653.
   c) Taylor HC (1949c): Vascular congestion and hyperaemia 111. Etiology and therapy: Am J Obstet Gynaecol 57:654-668.
5. Renaer M, Nijs P, Van Assche, A & Vertommen, H, 1980: Chronic pelvic pain without obvious pathology. Personal observations and a review of the problem. Eur J Obstet Gynaecol Reprod Biol 10:415-463.
6. Beard RW, Highman JH, Pearce S & Reiginald PW, 1984: Diagnosis of pelvic varicosities in women with chronic pelvic pain. Lancet ii, 946-949.
7. Cunanan RG, Courey MG and Lippes J, 1983: Laparoscopic findings in patients with pelvic pain. Am J Obstet Gynaecol 146:589.
8. Jacobson L and Westrom L 1969: Objectivized diagnosis of acute pelvic inflammatory disease. Diagnostic and prognostic value of routine laparoscopy. Am J Obstet Gynaecol 105:1088.
9. Sellors J, Mahony,J, Goldsmith C et al 1991: The accuracy of clinical findings and laparoscopy in pelvic inflammatory disease. Am J Obstet Gynaecol 164:113.
10. Ripps BA and Martin DC, 1991: Focal pelvic tenderness, pelvic apin and dysmenorrhoea in endometriosis. J Reprod Med 36:470.
11. Kresch AJ, Seifer DB, Sachs, LB et al 1984: Laparoscopy in 100 women with chronic pelvic pain. Obstet Gynaecol 64:672.
12. Koninckx PR, Lesaffre E, Meuleman C et al, 1991: Suggestive evidence that pelvic endometriosis is a progressive disease, Whereas deeply infiltrating endometriosis is associated with pelvic pain. Fertil Steril 55:759.
13. Roseff SJ and Murphy AA, 1990: Laparoscopy in the diagnosis and therapy of chronic pelvic pain. Clin Obstet Gynaecol 33:137.