

### Chronic Pelvic Pain: A dilemma

Asha Santosh,<sup>1</sup> Hammad Bin Liaquat,<sup>2</sup> Nagina Fatima,<sup>3</sup> Sidra Liaquat,<sup>4</sup> Mohammad Akhtar Anwar<sup>5</sup>  
Department of Obstetrics & Gynaecology,<sup>1-4</sup> Department of Statistics,<sup>5</sup> Jinnah Postgraduate Medical Centre (JPMC), Karachi, Pakistan.

#### Abstract

**Objective:** To determine the frequency of gynaecological factors leading to chronic pelvic pain via diagnostic laparoscopy. To see the association of these factors with demographic variables of the patients.

**Methods:** Fifty patients underwent the study over a period of 1.5 years from 1st January 2007 to 30th June 2008 at the Department of Gynaecology and Obstetrics, Jinnah Postgraduate Medical Centre, Karachi. All patients fulfilling inclusion criteria were admitted via Out Patient Department, underwent initial investigations and later Diagnostic Laparoscopy.

**Results:** Twenty nine patients were in 25-34 years age group and had parity between 1 to 5, and 56% of the patients belonged to poor socioeconomic and educational status. Pelvic Inflammatory disease was the most frequently found gynaecological etiology of Chronic Pelvic Pain (20% of patients) followed by endometriosis (14%) and Pelvic Congestion Syndrome (12%).

**Conclusion:** Chronic Pelvic Pain is a common problem of women with multifactorial etiology. Laparoscopy was found to be very effective in diagnosing the various gynaecological causes of the disorder (JPMA 60:257; 2010).

#### Introduction

Chronic Pelvic Pain (CPP) is defined as intermittent or constant pain in lower abdomen of at least 6 months duration not related exclusively to menstruation, intercourse or pregnancy. It is a very common complaint of gynaecology patients, a major cause of patient referral to gynaecology clinics, and has highly varying, unclear and numerous etiological factors, including disorders of gastrointestinal, urological, musculoskeletal and psycho-neurological systems. Along with these are the usual gynaecological causes such as endometriosis, pelvic adhesions due to Pelvic Inflammatory Disease (PID) or previous surgery, uterine fibroids, ovarian cyst, residual ovarian syndrome, and pelvic congestion syndrome.<sup>1-3</sup>

Due to the variable and unclear etiology, an accurate diagnosis is either delayed or difficult to ascertain which usually results in failure of treatment leading to frustration for the doctor and an increase in the suffering of the patient usually culminating in hysterectomies (up to 12% of cases) and loss of childbearing ability of the patient causing her further distress.<sup>3,4</sup> Studies have shown the patients with CPP have a higher risk of developing depression amongst various mental disorders, as well as have to bear the economic and social burden associated with the longevity of the disease.<sup>4-6</sup>

An accurate diagnosis is an important first step to determine the correct treatment for pain resolution.<sup>7</sup> The history, physical exam, and an extensive work-up are crucial and must involve all organ systems that can potentially be concerned. The investigations that can be utilized to find the diagnosis include high vaginal swabs (HVS), urine detailed

report and/or culture and sensitivity, ultrasound scan and endoscopic procedures however most of these are used infrequently as they are often uninformative or unsuccessful in eliciting a cause.<sup>3,8</sup>

Diagnostic laparoscopy is one of the few investigations available that could be used to determine the exact cause of CPP.<sup>9</sup>

Although laparoscopy is very frequently used by surgeons in a wide spectrum of surgical procedures all over the world, its utility as a diagnostic procedure for CPP was not favoured initially, either due to lack of data on its effectiveness as a diagnostic modality, lack of training or expertise amongst gynaecologists, and/or lack of awareness among both doctors and patients.<sup>7</sup> As further research was carried out, increasing numbers of gynaecologists began to realize the efficacy of diagnostic laparoscopy and utilize it in eliciting a diagnosis.<sup>10,11</sup>

The primary objective of our study was to determine the frequency of gynaecological factors causing chronic pelvic pain, by utilizing diagnostic laparoscopy. A secondary objective was to determine the association of gynaecological factors based on a diagnostic laparoscopy with demographic variables.

#### Methodology

It was a cross-sectional study undertaken in Ward - 9 (Gynae Unit -II), Department of Obstetrics & Gynaecology, JPMC, Karachi. It was conducted over a period of 18 months from 1st January, 2007 to 30th June 2008. Fifty patients were admitted in the ward through Out Patients Department with

CPP of at least 6 months duration via a non-probability convenience sampling technique.

The patients included in study comprised of women of reproductive age with lower abdominal pain for longer than 6 months, those who had lower abdominal pain and dysmenorrhea for more than 6 months and/or those who had complaints of lower abdominal pain and infertility.

All patients with lower abdominal pain and proven urinary tract infection or symptoms suggestive of gastrointestinal diseases were excluded from the study.

All patients fulfilling the inclusion criteria underwent high vaginal swab (HVS), urine detailed report and culture and ultrasound pelvis. The patients were then explained the procedure and its purpose and an informed consent was taken and diagnostic laparoscopy performed.

During the procedure the patient was under general anaesthesia, placed in a lithotomy position, scrubbed and draped. Both open and closed techniques of the procedure were used according to operator's choice. A single sub umbilical port was used in most cases while a second port was utilized when the pelvic organs could not be visualized easily. The whole pelvic cavity was examined and a diagnostic curettage was performed in most cases for histopathology to find the cause of CPP.

After the procedure, a detailed history of the patient and the findings of the procedure, both intra-operatively as well as on histopathology were added to a specially designed Proforma. The information gathered was analyzed on the statistical package SPSS 13.0. Relevant tests were applied for categorical variables such as age, parity, education status, presenting complaints, history, socioeconomic status and various etiologies of CPP.

Mean, median and standard deviation were applied to quantitative variables such as frequency of each gynaecological etiology found on diagnostic laparoscopy.

## Results

There were 50 patients enrolled for the study. Twenty-nine (58%) patients belonged to 25-34 years age group with mean age  $29.62 \pm 5.7$  years. There were 39(78%) multipara, and 11 nulliparas (22%) all of whom were infertile at presentation. Thirty-seven (74%) patients were illiterate with 20% matriculates and only 6% having completed higher education.

The mean number of family members of the patients was  $7 \pm 4.1$ , while the mean number of earning members in the family was  $1.42 \pm 0.9$ .

Out of the 50 women, 28 (56%) were from the low-socioeconomic class (income less than Rs. 5000 per month), 20 from the middle-class (monthly income between Rs. 5000-

15000) and the remaining 2 were from high-income class (monthly income greater than Rs.15000) with mean income of  $Rs. 9886 \pm 862.1$ .

In terms of patient's occupation, 43 (86%) were housewives while 3 patients worked as maids, 2 as labourers, 1 as a teacher and the other was a staff nurse.

In terms of patients' complaints, the maximum duration of lower abdominal pain was found to be 36 months which was tolerated by 6 patients (12%). The largest number of patients (38%) tolerated the pain from 19-30 months followed by 10 (20%) patients having pain for 6-12 months and 7 (14%) for 13-18 months.

Dysmenorrhoea was the most commonly associated symptom i.e. it was found in 75% of the patients followed by dyspareunia (72%), infertility (22%), oligomenorrhoea (20%), vaginal discharge (18%) and menorrhagia which was least common (6%).

In past surgical history of the patients, previous abdominal surgery was found in 8 patients (16%) out of whom 3 had appendicectomy, 3 had C-section (6%) and the remaining 2 (4%) had undergone tubal ligation. All the patients underwent diagnostic laparoscopy after relevant initial investigations.

The procedure was successful in determining gynaecological etiology of chronic pelvic pain in the majority of the patients (74%). Amongst the various causes found, Pelvic Inflammatory Disease was most common (20%), followed by endometriosis at 14%, pelvic congestion syndrome (12%), post-operative adhesions and fibroids each in 4 patients (8%), followed by less common findings such as ovarian cyst (6%), chronic ectopic pregnancy(4%) and intrauterine contraceptive device (IUCD) (2%). No pathology was discovered only in 26% of patients.

## Discussion

Chronic pelvic pain (CPP) is a common health problem which affects millions of women world wide.<sup>12</sup> It presents a major challenge to health care providers because of its unclear etiology, complex natural history and poor response to therapy. Laparoscopy is considered to be a useful diagnostic tool, providing a positive finding in two-thirds of women with chronic pelvic pain and offering some benefit, even when findings are negative, because of its reassuring effects.<sup>13</sup>

In the present study the mean age of patient with CPP was found to be  $29.62 \pm 5.7$  years which is slightly less than the mean age reported by Bunyavejchevin S<sup>11</sup> ( $33 \pm 9$  years) while Redecha et al found CPP in a younger population ( $24 \pm 9$  years).<sup>10</sup>

In all 22% women of this study were nullipara and 78% were multipara. Approximately similar results were

reported by S. B. Kang, which were 20.3% and 79.7% respectively.<sup>14</sup>

There were 43 (86%) housewives, 37 (74%) were illiterate and most common finding among these patients was Pelvic Inflammatory Disease (PID) for which illiteracy, poverty, poor hygienic living status and inaccessibility to health care education are common risk factors. A study conducted in Jamshoro showed that most of the women who were suffering from CPP due to PID were housewives (78%).<sup>15</sup>

In our study it was found that a majority of women (56%) belonged to lower socioeconomic class, 40% to middle class and only 4% from higher class which is comparable to a study conducted by Sharma who reported 68.1%, 29.4% and 12.5% respectively.<sup>16</sup>

The mean duration of CPP was  $12.69 \pm 9.4$  months which is comparable with the study of P. Zubor at 11.5 months.<sup>17</sup> Dysmenorrhoea, a very common complaint is experienced by 45-95% of women of reproductive age.<sup>18</sup> In our study patients, dysmenorrhoea was the most frequent associated symptom (74%) followed by dyspaerunia (72%). Prevalence rates of dysmenorrhoea abdominal pain and dyspaerunia found in UK community based studies were 45-97%, 23-29 % and 8% respectively.<sup>12</sup>

In our study 16% of patients had previous abdominal surgery. Clinically postoperative adhesions were suspected in 8% of cases as a cause of CPP and the same was confirmed on laparoscopy. In S.B. Kang's study there was a previous history of abdominal surgery in 4.5% case and on laparoscopy postoperative adhesions were found in 2% of cases which is comparable to the our findings.<sup>14</sup>

On clinical examination 14% patients were diagnosed with PID, while PID was found in 20% of cases on laparoscopy. In world literature PID is reported in 18.6% and 17.7% respectively.<sup>10,19</sup>

In the 50 patients of CPP in our study, endometriosis was suspected clinically in 6% cases while it was found in 14% cases on laparoscopy. In this regard, there is a wide variation found in studies around the world. P. Zubor found endometriosis in 31.4%,<sup>17</sup> Mara M et al in 20.4%,<sup>19</sup> Hussain in 13.3% of cases.<sup>20</sup> Mehmood did laparoscopy on infertile patients and found endometriosis in 16.16% cases.<sup>21</sup>

Pelvic congestion syndrome was diagnosed in 12% of studied patients which is comparable to other studies (13%,11.2%).<sup>14,22</sup>

In the present study 8% cases had fibroid uterus on laparoscopy. Almeida reported a slightly lower figure (6.9%)<sup>22</sup> while it was much higher (15.15%) in infertile patients that were part of Sohail's study.<sup>21</sup>

Chronic ectopic pregnancy describes the slow disintegration of the tubal wall accompanied with multiple episodes of haemorrhages resulting in pelvic mass. Although patients can present with acute symptoms and catastrophic complications, yet in a significant number of cases a diagnosis is usually missed at initial stages either due to lack of expertise, vague clinical features such as chronic pelvic pain, or due to high incidence of false negative results of investigations.<sup>23</sup> In our study chronic ectopic pregnancy was clinically suspected in 2% of the cases while on laparoscopy we found 4% cases which was also confirmed by histopathology report. This result is comparable with a local study done by Shoaib F. in which a figure of 2.5% was reported.<sup>24</sup>

One case (2%) was suspected to have misplaced IUCD clinically which was confirmed on laparoscopy. Migration of IUCD from uterus to pelvic cavity as a cause of CPP has been reported previously as well.<sup>25</sup>

In 44% of the patients there was no clinically identifiable cause of CPP whereas only 26% of patients had normal findings on laparoscopy. This huge difference indicates the importance of diagnostic laparoscopy in evaluation of CPP. Mara M et al reported normal findings in 17.7% of CPP,<sup>19</sup> Redecha M et al in 16.27% cases<sup>10</sup> and S.B. Kang reported normal pelvis in 21.2% patients with CPP.<sup>14</sup> The consequences of a negative laparoscopy have not been well studied but many women feel let down. At the same time it has also been found to be reassuring since patients have been shown to symptomatically improve after exclusion of all pathology by the procedure.<sup>13</sup>

## Conclusion

Laparoscopy is a valuable and useful tool for identifying the cause of CPP. Infection was the most common cause which can be attributed to ignorance, unhygienic conditions and low socioeconomic conditions.

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