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Role of diagnostic laparoscopy in women with chronic pelvic pain

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Abstract---Background and Aim: Chronic pelvic pain can be diagnosed and treated with laparoscopy, which can reveal findings that cannot be detected clinically. There are many health related issues associated with chronic pelvic pain, and it negatively impacts overall health and ability to work. An assessment of diagnostic laparoscopy's role in chronic pelvic pain women was the purpose of the present study. Patients and Methods: This cross-sectional study was carried out on 98 women (16-45 years) present with chronic pelvic pain attended the Gynecology and Obstetrics Department of Khyber Teaching Hospital, Peshawar from June 2020 to June 2021. Study protocol was approved by institute research and ethical committee. Women with chronic pelvic pain (>6 months) without obvious pathological findings based on ultrasound and clinical examination were enrolled. Clinical findings, laparoscopic data, and ultrasound examination of each individual was recorded. SPSS version 28 was used for data analysis. Results: The overall mean age was 26.34±4.6 years. Age-wise distribution of women was as follows: 8 (8.2%) in 16-25 years, 48 (49%) in 26-35 years, and 42 (42.8%) in 36-45 years. Majority of women (92.6%) were married. About 9 (9.2%) women underwent previous surgery. The incidence of dull and sharp pain, dysmenorrhea, infertility, vaginal discharge, dysuria, dyspareunia, and backache was 39 (39.8%), 52 (53.1%), 48 (49%), 42 (42.9%), 8 (8.2%), 44 (44.9%), and 48 (49%) respectively. Based on laparoscopic examination, the prevalence of pathological lesions

(abnormal) was 68 (69.4%) which comprised of tuberculosis 18 (18.4%), pelvic inflammatory diseases 9 (9.2%), endometriosis 10 (10.2%), ovarian cyst (>5 cm) 7 (7.1%), pelvic adhesion 9 (9.2%), pelvic congestion 9 (9.2%) and uterine fibroid 6 (6.1%). Conclusion: The present study found that a high prevalence of pelvic tuberculosis and endometriosis as causes of the disease. After pelvic pathology is confirmed by laparoscopic surgery, chronic pelvic pain can be better managed. Patients with chronic pelvic pain are evaluated with laparoscopy, the gold standard procedure.

Keywords--Chronic pelvic pain, diagnostic accuracy, endometriosis, pelvic adhesions.

Introduction

Chronic pelvic pain (CPP) is characterized as chronic discomfort in the lower abdomen or pelvis that has lasted at least 6 months. If severe enough, it may result in functional handicap or necessitate medical care and occur in the pelvis, lower abdominal wall, lumbosacral spine, and buttocks [1]. Approximately 15 percent of women between the ages of 18 and 49 report experiencing CPP, however less than a third seek medical treatment [2]. There is a 10% prevalence of CPP in gynecological consultations, and it accounts for 40% of laparoscopic exploratory procedures [3]. Gynecological disorders, gastro-intestinal disorders, and urological disorders can all lead to CPP. Though neurological, musculoskeletal, and psychiatric problems are less frequent in such people, they should be considered [4]. More than one aberration can be identified in a single patient in 25 to 50% of instances, making diagnosis and treatment more complex [5]. A thorough medical history, combined with a thorough physical examination, is essential for addressing patients' right diagnosis and care. Nowadays, it is becoming increasingly clear that a multidisciplinary approach is one of the greatest ways to provide tailored care to patients [6].

Chronic pelvic pain is a frequent ailment that has a significant influence on one's health-related quality of life and capacity to work. The source of pain is not always clear, as pathology is not present in 40-60% of instances [7]. Diagnostic laparoscopy is the gold standard for determining the underlying disease in women with chronic pelvic discomfort; it also aids in preventing needless laparotomies [8]. Laparoscopy is an effective method for diagnosing and treating disorders linked with persistent pelvic discomfort [9]. The "see and fight" philosophy governs laparoscopy for persistent pelvic discomfort [10]. It allows for direct viewing of intra-abdominal organs, simplifies biopsy and culture, and allows for therapeutic intervention [11]. The purpose of this research was to identify good laparoscopic results in such situations.

Methodology

This cross-sectional study was carried out on 98 women (16-45 years) present with chronic pelvic pain attended the Gynecology and Obstetrics Department of Khyber Teaching Hospital, Peshawar from June 2020 to June 2021. Study

protocol was approved by institute research and ethical committee. Women with chronic pelvic pain (>6 months) without obvious pathological findings based on ultrasound and clinical examination were enrolled. Clinical findings, laparoscopic data, and ultrasound examination of each individual was recorded. Severe hypertension, cardiac illness, local abdominal infections, morbid obesity, bleeding disorders, coronary artery disease, and chronic disease of obstructive lungs were excluded. Patients with complaint of chronic pelvic pain and having pelvic pathological lesions detected on ultrasound examination were excluded. Detail history was taken for the assessment of each individual. Abdominal and general physical examination was done in physical examination. Gynecology investigations included perineum and vulva inspection, vagina and cervix examination in speculum examination, and bimanual examination included the evaluation of tenderness, size, uterus mobility, urethra tenderness, adnexa, cervical motion, uterus mobility, and vaginal fornix. Complete blood count, urine culture, liver function test, urine routine, coagulation profile, Chest x-rays, transvaginal ultrasound, kidney function test, electrocardiogram, chronic antigen, and lactic dehydrogenase. SPSS version 28 was used to gather and analyze the data. The results were given as percentages, and the chi-square test was used to compare proportions with significance at p-values less than 0.005.

Results

The overall mean age was 26.34 ± 4.6 years. Age-wise distribution of women was as follows: 8 (8.2%) in 16-25 years, 48 (49%) in 26-35 years, and 42 (42.8%) in 36-45 years. Majority of women (92.6%) were married. About 9 (9.2%) women underwent previous surgery. The incidence of dull and sharp pain, dysmenorrhea, infertility, vaginal discharge, dysuria, dyspareunia, and backache was 39 (39.8%), 52 (53.1%), 48 (49%), 42 (42.9%), 8 (8.2%), 44 (44.9%), and 48 (49%) respectively. Based on laparoscopic examination, the prevalence of pathological lesions (abnormal) was 68 (69.4%) which comprised of tuberculosis 18 (18.4%), pelvic inflammatory diseases 9 (9.2%), endometriosis 10 (10.2%), ovarian cyst (> 5 cm) 7 (7.1%), pelvic adhesion 9 (9.2%), pelvic congestion 9 (9.2%) and uterine fibroid 6 (6.1%). Figure-1 depicts the age-wise distribution of patients. Demographic details of patients are shown in Table-I. Clinical manifestations of major complaints are illustrated in Figure-2. Pathological lesions based on laparoscopic examination are demonstrated in Figure-3. Table-II represents Pelvic examination clinical findings among studied population. Pain duration prior to laparoscopy among patients are shown in Table-III.

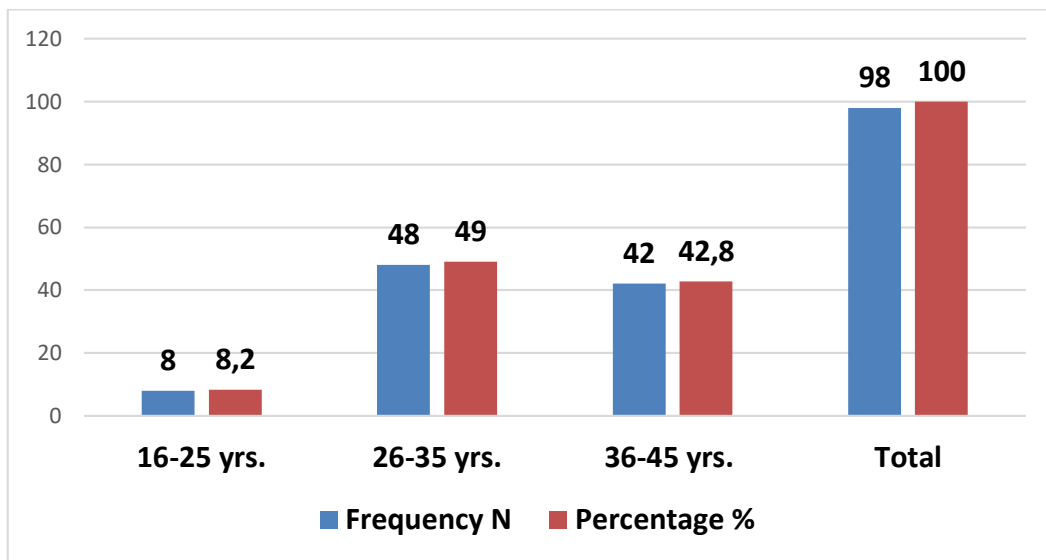


Figure-1 Age-wise distribution (n=98)

Table-I Socio-demographic details of all the women (n=98)

Variables	N (%)
Marital status	
Married	91 (92.6)
Un married	7 (7.4)
Parity (N=91)	
Nulliparous	45 (45.9)
Para 1-2	19 (19.4)
≥3	27 (27.6)
Previous surgery	
Yes	9 (9.2)
No	91 (90.8)

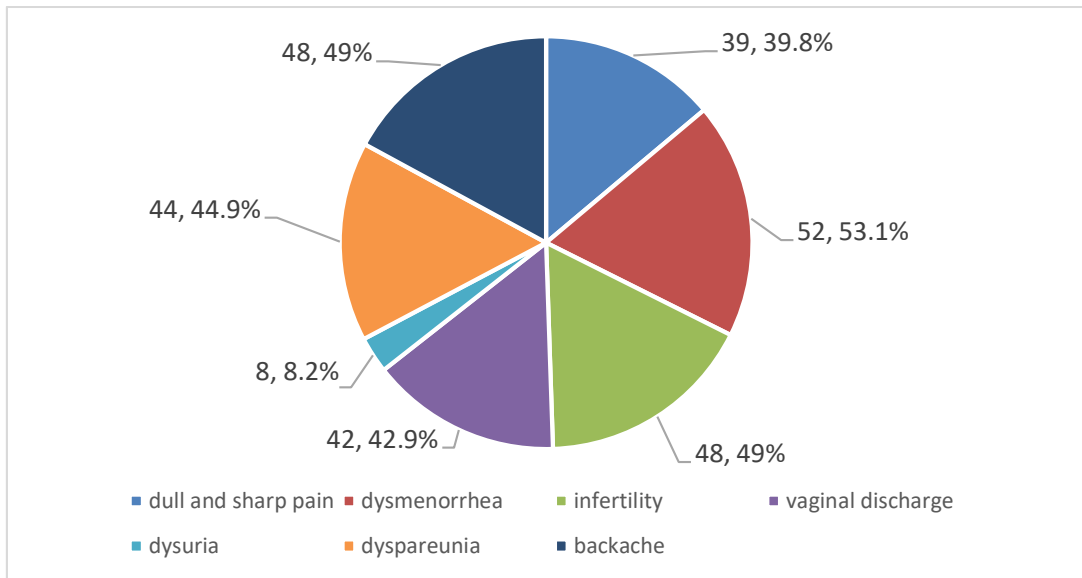


Figure-2 Clinical manifestations of major complaints

The dysmenorrhea was the most prevalent clinical manifestation followed by dull and sharp pain, dyspareunia, and vaginal discharge.

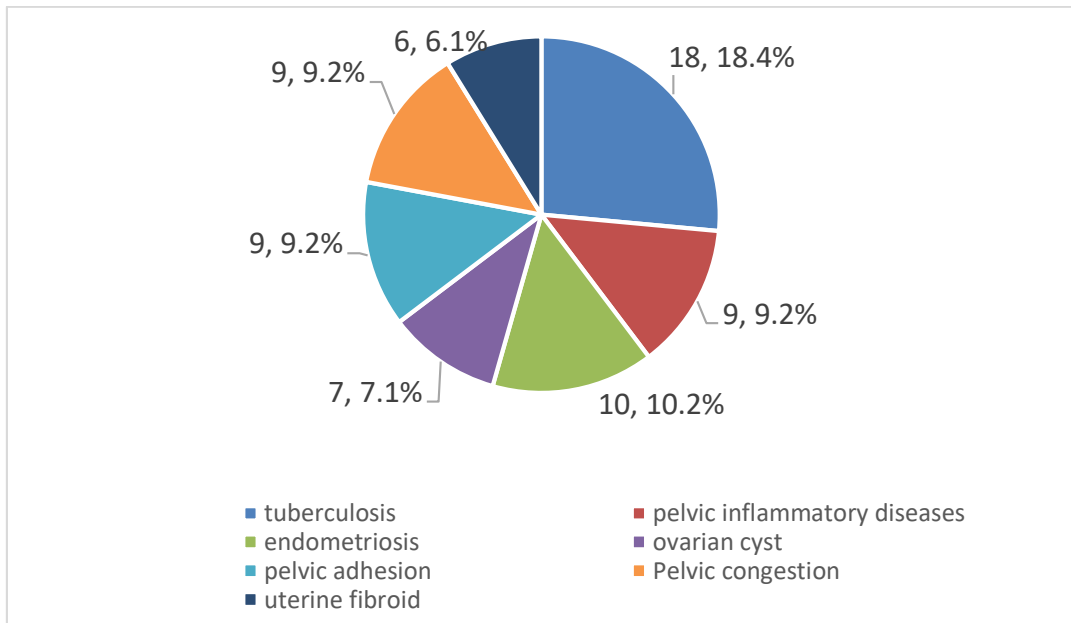


Figure-3 Pathological lesions based on laparoscopic examination

Tuberculosis was the most common pathological lesion followed by endometriosis, pelvic inflammation disease, pelvic adhesion, and ovarian pathology (n=68).

Table-III Pain duration prior to laparoscopy among patients

Duration of Pain (months)	N (%)
6-12	74 (75.5)
13-18	21 (21.4)
19-24	3 (3.1)
Total	98 (100)

Discussion

Diagnostic laparoscopic surgery in women with chronic pelvic pain was the major focus of the current study and found that laparoscopy is a gold standard method for evaluating women with persistent pelvic discomfort since diagnosis and therapy may typically be completed in a single sitting without the need for an exploratory laparotomy. Chronic pelvic pain can be treated more effectively with surgical confirmation of underlying pelvic disease. In this investigation, the most prevalent causal disease was pelvic TB, followed by endometriosis. Laparoscopies are done in more than 40% of cases to diagnose pelvic discomfort [12]. The most common pathological disorders found on laparoscopy in this investigation were TB, endometriosis, pelvic inflammatory disease, and adhesions. Because of the non-specific symptoms, even an experienced physician may find it difficult to diagnose peritoneal TB [13, 14]. The majority of subjects (75.5%) experienced persistent pelvic discomfort lasting 6-9 months. Only one patient (3.1%) had pain that lasted more than 24 months. The average length of persistent pelvic discomfort before to laparoscopy was 10.5 ± 7.52 months.

Chronic pelvic pain is an enervating illness that affects 4% of women and has a significant influence on quality of health-associated life and care system [15]. CPP is difficult to diagnose since it might instigated by problems of the gastrointestinal system, reproductive tract, urinary organs, musculoskeletal and psycho-neurological systems [16]. Gynecologic disorders represent for roughly 20% of CPP cases [17, 18], with IBS being the two most commonly diagnosed pathologies [19]. Among the several gynecological disorders, numerous studies identify endometriosis and adhesions the most prevalent CPP causes [20, 21]. The significant occurrence of adhesions and endometriosis in CPP was verified in our series, correlating with prior findings.

Even if the size of lesions does not correspond with the level of pain, the association between symptoms of pain and deep infiltrated endometriosis (DIE) is now established [22]. On the contrary, there is no compelling evidence between endometria with painful symptoms. According to a previous study, painful endometriosis are usually related with peritoneal implants, or deep infiltrating lesions, pelvic adhesions, and the level of discomfort is unrelated to endometrioma size (2-5 cm) [23].

A prior research conducted by Khan et al. found that pelvic inflammatory illness occurred in 3% of patients throughout adolescence. Laparoscopy can also be helpful in conditions where chronic pelvic illness has been misdiagnosed in determining the risk factors for pelvic inflammatory disease [24]. Though, several studies investigated on microscopic intestinal endometriosis provide very small

lesions clinical significance. The authors demonstrated the existence of distance from excised macroscopic lesions to microscopic endometriosis [25, 26].

Pelvic inflammatory illness is often caused by microbes rising from the cervix or vagina into the upper genital tract. Because the clinical manifestation of simple types are modest or deceptive, laparoscopy is frequently required for diagnosis. Pelvic inflammatory illness was detected on laparoscopy in 8 (9.4%) of the patients in this research, which is lower than in other western studies where pelvic inflammatory disease is more frequent [27]. This might be due to the influence of social, cultural, and religious factors on sexual behaviors. The majority of these women were between the ages of 26 and 45. A research from Athens discovered pelvic inflammatory illness in 3% of adolescent patients [28]. Farber et al. shown that laparoscopy can also be beneficial in circumstances when persistent pelvic illness has been misdiagnosed [29].

Conclusion

The present study found that a high prevalence of pelvic tuberculosis and endometriosis as causes of the disease. After pelvic pathology is confirmed by laparoscopic surgery, chronic pelvic pain can be better managed. Patients with chronic pelvic pain are evaluated with laparoscopy, the gold standard procedure.

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