

Chronic Pelvic Pain in Women: A Retrospective Analysis at a Tertiary Care Centre in Bihar

Poonam¹, Praphull Deepankar²

ABSTRACT

Introduction: Chronic pelvic pain (CPP) is common among women of reproductive age group. Prevalence of chronic pelvic pain vary widely depending on the definition used and range from 2% to 27% of adult females worldwide. The objective of this study was to know the 'period prevalence' of CPP from December 15th 2018 to May 15th 2019 along with a secondary aim to identify the associated risk factors.

Material and methods: The retrospective study was carried out in the department of Obstetrics and Gynaecology, at a tertiary care teaching hospital. The study period was for six months (Dec '18-May'19).

Results: The prevalence of chronic pelvic pain was 25% (n=1413) in women > 18 years with a maximum prevalence of 34% (n=484) in women of 30-39 years age group. Thirty seven percent (n=530) were associated with irritable bowel syndrome; Psychosocial factors were seen in 35% cases; 31% (n=438) suffered from constipation; 30% had associated urinary symptoms; 0.2% (n=4) had varicose veins in inner thigh and vulval region, 9% (n=127) had chronic PID. 3% had suspected nerve entrapment and another 3% had adhesions. Eight percent had pain related to musculoskeletal system. 6% (n= 84) with no other associated symptom had usg finding of endometriosis.

Conclusion: The prevalence appears to be high (25%) in our part of the country. Owing to its multifactorial aetiology, the gynaecologists should develop the habit of looking beyond the uterus.

Keywords: Chronic Pelvic Pain; Prevalence; Risk Factors

INTRODUCTION

Chronic pelvic pain is a worldwide problem affecting women of all ages. It is frustrating for patients as it causes significant distractions in their day to day lives and challenging for health care providers. Its complex nature and the lack of knowledge surrounding this condition, leads to frequent neglect. These out-patient consultations give rise to a significant operative load, and as many as 2/5 laparoscopies and 1/8 hysterectomies may be performed for chronic pelvic pain.¹ Therefore, this study was carried out to know its prevalence and the associated risk factors so as to reduce its burden wherever possible. The definition of chronic pelvic pain used for the analysis was, 'constant or recurrent pain in the lower abdominal region lasting for at least 6 months, excluding pain related to pregnancy or malignancy, or pain that occurs only with menstruation or intercourse.'³ The site of pain includes the anatomic pelvis, anterior abdominal wall at or below the umbilicus, the lumbosacral back, or the buttocks, and is of sufficient severity to cause functional

disability.

Many conditions produce chronic pelvic pain in women and the problem ranges from causes in gastrointestinal tract, bladder, mind and many more to gynaecological diseases. These non gynaecological causes have either been underdiagnosed or overlooked in OBG departments. This work has been done:

1. To know the 'period prevalence' of chronic pelvic pain from December 15th 2018 to May 15th 2019 along with
2. The aim to identify the associated risk factors, especially the non gynaecological ones, for chronic pelvic pain in women.

MATERIAL AND METHODS

The study was carried out in the department of Obstetrics and Gynaecology for a period of six months (December 15th 2018 to May 15th 2019). Total number of patients seen during this period and those with pelvic pain were taken from the OPD record register. Thereafter, case files of only those who had pelvic pain for more than six months were identified. The data thus extracted from the case files, which are preserved in the hospital, were entered into Microsoft excel spread sheets and analysed with the help of calculator. Results were rounded off to the closest value. 'Period prevalence' for six months duration (December 15th 2018 to May 15th 2019) was calculated. Period prevalence is the proportion of a population that has the condition at some time during a given period.

Only those cases who had pelvic pain for more than six months were included. Inclusion criteria for sites of pain were 1. Pain in the anatomic pelvis 2. anterior abdominal wall at or below the umbilicus, 3. The lumbosacral back, or the 4. buttocks.

Cyclical pain and pain related to pregnancy and malignancy were excluded from the study. The idea was to identify the non gynaecological causes of pelvic pain.

¹Additional Professor, Department of Obstetrics and Gynaecology, Indira Gandhi Institute of Medical Sciences, Patna, ²Assistant Professor, Department of Medicine, Indira Gandhi Institute of Medical Sciences, Patna, India

Corresponding author: Dr Poonam, Doctors Qr-D-6/1, IGIMS Campus, Sheikhpura, Patna-14, India

How to cite this article: Poonam, Praphull Deepankar. Chronic pelvic pain in women: a retrospective analysis at a tertiary care centre in Bihar. International Journal of Contemporary Medical Research 2019;6(8):H10-H14.

DOI: <http://dx.doi.org/10.21276/ijcmr.2019.6.8.31>

RESULTS

Total number of patients seen in six months from 15th December 2018 to 15th May 2019 were 5654. The number of patients identified with chronic pelvic pain was 1413. This accounted for a period prevalence of 25% in women > 18 years with a maximum prevalence of 34% (n=484) in women of 30-39 years age group. Majority of patients had more than one symptom other than pelvic pain.

Table 1-Depicts the age profile of the studied population. Maximum number of patients (n=484) belonged to 30-39 years age group followed by 40-49 yrs age group (343). The least number was seen in 60-70 years group (n=129) followed by younger age group(n=143).

Table 2- Shows the contributory factors in the genesis of chronic pelvic pain.

Maximum number of patients (n=530) had irritable bowel syndrome which accounted for 37% of the total cases.

This was followed by psychosocial factors in 35% (n=494). In this category upto 40% were ill treated at home. Thirty percent cases (n =148) were not living with their spouse either due to work related reasons or marital disharmony.

Almost equal number of patients were seen in those with constipation 31% (n=438) and bladder related symptoms 30% (n=424).

In those with constipation, majority had inadequate daily intake of water.

There were 9% (n= 127) patients with history of PID with no other symptom apart from chronic pelvic pain.

Total number of patients with abdominal scars were 6% (n=84).Out of which 3% (n=42) patients (thirty cases of caesarean sections and ten cases of hysterectomy) complained of stabbing pain localised over the pfannenstiell stitch line. All caesareans were done more than one year back and hysterectomies were done than three years back.

Remaining 3% (n=42) complained of pain on stretching movements and some on changing posture.

Abnormal posture and backache was associated in 8% (113) cases. In many files information on posture was lacking.

About 0.2% (n=4) patients had varicose veins in their vulval and inner thigh region. All had history of recurrent PID and all were working in private companies.

Table 3 Deals with the associated symptoms arising from the bowel.

Twenty three percent of total patients (n=300) had bloating. This was followed by ‘pain relieved by defecation’ in 20% (n=278/1413) and incomplete evacuation in 19% (n= 270). Diarrhea was seen in only 6% cases (n=80). Constipation alternating with loose stool was seen in 4% cases (n=53). In category 16% (n= 230) had pain 2 times a month and 21% (n=300) had pain more than 2 times a month. In the remaining cases nothing regarding frequency of pain was mentioned. Majority of patients had more than one symptoms.

Table 4 Deals with the associated genitourinary symptoms with chronic pelvic pain.

Twenty four percent of total patients presented with urgency (n=344/1413) followed by frequency in 22% (n=314) of

Age range	Number	Percent
18-29	143	10
30- 39	484	34
40-49	343	24
50-59	314	22
60-70	129	9
Total	1413	

Table-1: Showing age Profile of patients with chronic pelvic pain.

Attributable causes		Percentage
Irritable bowel syndrome	530	37%
Psychosocial factors	494	35%
Constipation	438	31%
Bladder related	424	30%
Varicose veins	4	0.2%
Poor posture, & low backache	113	8%
Chronic PID	127	9%
Nerve entrapment	42	3%
Prior abdominal/Pelvic surgeries	84	6%

Table-2: Showing contributory factors in the genesis of chronic pelvic pain.

Pelvic pain & associated bowel symptoms	N=	% of total patients
1. Pain relieved after bowel movement	278	20
3. Incomplete evacuation	270	19
4. Diarrhea	80	6
5. Bloating	325	23
6. Loose stool alternating with constipation	53	4
7. Pain 2 times a month	230	16
8. Pain >2times a month	300	21
9. Constipation	438	31

Note –Majority of patients had more than one symptom

Table-3: Showing Chronic pelvic pain along with bowel symptoms

Pelvic pain & associated genitor-urinary symptoms	N=	% of total patients
1. Frequency	314	22
3. Urgency	344	24
4. Nocturia	254	18
5. Dysuria	200	14
6. Suprapubic tenderness	281	19
7. Pain relieved on bladder emptying	281	19
8. Vulvar irritation & burning	84	6
9. Urge incontinence	211	15

Note - Majority of patients had more than one genitourinary symptom.

Table-4: Showing Chronic pelvic pain along with genitourinary symptoms

patients. Suprapubic tenderness was present in 19%(n=281) with similar rates in patients who got ‘relieved of pain after emptying bladder’. In these patients urine showed sterile pyuria. Nocturia accounted for 18%(n=254) followed closely by urge incontinence which was seen in 15% (n=211)

patients. Patients with nocturia were mainly in 50-70 years age range.

Vulval irritation along with burning was seen in 6% cases (n=84). Sixty of these patients were between 30-45 years age group and the remaining twenty four patients were between 59-70 years.

Most patients had more than one symptom.

DISCUSSION

The results of this study show that chronic pelvic pain (CPP) is common among women of reproductive age. The definition of CPP used for the analysis was 'constant or recurrent pain in the lower abdominal region lasting for at least 6 months, excluding pain related to pregnancy or malignancy, or cyclical pain that occurs only with menstruation or intercourse.³ The site of pain includes the anatomic pelvis, anterior abdominal wall at or below the umbilicus, the lumbosacral back, or the buttocks, and is of sufficient severity to cause functional disability.

Estimates of the prevalence of chronic pelvic pain vary widely depending on the definition used and range from 2% to 27% of adult females worldwide.³ Majority had more than one symptom other than chronic pelvic pain

The 'period prevalence' of chronic pelvic pain for the studied duration of six months was 25% in women >18 years with a maximum prevalence of 34% (n=530) in 30-39 years age group. Decreasing trend of chronic pelvic pain is obvious before and after reproductive age group.

The increased prevalence in reproductive age group correlates well with the study done in UK reporting an annual prevalence of of 38/1000 in women aged 15-73, at primary care as quoted by Zondervan et al.²

This could be due to perineal trauma and infection, inflicted during childbirth either in form of episiotomy, perineal tear, excessive stretching of pelvic floor muscles or surgery. In due course of time, pain adaptation occurs, so less rate is observed in women beyond reproductive age group.

Analysis of risk factors for chronic pelvic pain is highly complicated owing to its multifactorial aetiology.² The commonest associated symptom was from bowel, in women of reproductive age group. Irritable bowel syndrome accounted for 37% of cases. Patients who had pain more than once a month, with bloating and altered bowel habit were considered to have irritable bowel syndrome. It is associated with a change in the consistency or frequency of stools, and relieved by defecation. Pattern that strongly suggest IBS include abnormal stool frequency noted as greater than three episodes per day or less than three episodes per week; abnormal stool form which may be in lumps, watery, or hard; abnormal stool passage with either straining, urgency, or incomplete evacuation; passage of mucous in stool; or bloating.

Although essentially a diagnosis of exclusion, it can be confidently diagnosed from the history alone.⁵ The findings of this study is consistent with the findings of Williams et al.⁶ Similar rates of IBS were found by Prior A et al.¹⁴ Reason for high rates could be that these days many women are working

outside to earn their livelihood. To maintain balance between work and home they don't get ample time to take care of themselves resulting in irregular food habits like skipping meals and consuming fast food along with caffeine and carbonated beverages to compensate.

Psychosocial factors also occupied a major place (35%) in the associated risk factors. A history of sexual and physical abuse is common among women of reproductive age.⁴ In this study also psychosocial factors accounted for 35% of cases where there was history of abuse and domestic violence and also in those who lived separately from their spouse either due to job related reasons, discordial relations or legal separation. The probability of reduced capability in coping with pain due to stress, depression and anxiety could be operating in these cases. Similar association of chronic pelvic pain can be found in the study of Heim C et al.¹⁵

Constipation is another, frequent non gynecologic cause of chronic pelvic pain. Chronic constipation is described as a common complication determined by difficult and/or rare passage of stool or both. The difference in definition of constipation has led to a wide range of reported prevalence (i.e., between 1% and 80%).⁷

In this study also the large association of chronic pelvic pain with constipation (31%) was not surprising as majority had inadequate daily intake of water on top of increased consumption of packaged precooked and fast food made of refined flour. Above all, faulty lifestyle with little or no exercise could be responsible for such large number of these patients with constipation. Chronic constipation may cause pelvic pain by distention of sigmoid colon and pressure on surrounding structure. Constipation is very common, and although perhaps rarely the primary source of pain, may make an important contribution to the overall pain burden.¹⁹ Urologic problems may also be associated with chronic pelvic pain.

It accounted for 30% of cases. CPP commonly has a urologic basis, primarily interstitial cystitis. This condition is substantially underdiagnosed, with 70% of patients with interstitial cystitis having CPP, and 38% to 85% of patients with chronic pain having interstitial cystitis.²⁰

It could be related to increased sexual activity where microbes moves from the bowel or vaginal cavity to the urethral opening, although they are cleared through urine within twenty four hours. Repeated bacterial invasion could destroy the epithelium and increase the exposure to toxins present in urine resulting in inflammation, not necessarily infection. About 19% patient had suprapubic pain and tenderness which disappeared after passage of urine. Urine analysis showed sterile pyuria. This could be due to interstitial cystitis. Interstitial cystitis may be caused by specific foods, allergens, or stress.

Some elderly, perimenopausal patients had irritative symptoms, and incontinence which is rare in interstitial cystitis. It may be due to chronic urethral syndrome which is a variation of interstitial cystitis or an earlier form of the same disease.⁷ Hypoestrogenic state may be the reason in these patients. It is associated with vulvar irritation, vulvodynia,

dyspareunia and post coital voiding difficulties, apart from chronic pelvic pain.

There were 9% (n= 127) patients with history of PID with no other symptom apart from chronic pelvic pain. The term can be used loosely to mean either recurrent episodes of upper, genital tract infection, or the residual damage caused by past episodes of pelvic infection. This damage may take the form of adhesions, or perhaps, due to inadequate treatment in the past.¹⁹ In this category seventy six cases were from low socioeconomic group and forty five patients had stopped medications on their own three to four days after initiating treatment in past. Although financial burden of treatment plays an important role for such class, patients need to be educated on significance of completing treatment and also on antibiotic resistance and their consequences.

Another important factor which operates here is the use of homemade reusable sanitary pads in the lower socioeconomic group of patients.

Out of the total 84 patients with history of surgery, 3%(n=42) patients had stabbing pain localised over the Pfannenstiel stitch line and was exacerbated by a particular movement. This could be due to nerve entrapment at the edge of the rectus muscle, as they penetrate the fascia. The pain had no relation to menses. In one study of patients who had one Pfannenstiel incision, the incidence of nerve entrapment (defined as sharp pain, stabbing in nature, or may be a constant dull ache, persisting longer than 5 weeks after the operation, or occurring after a pain-free interval), was 3.7%.¹¹ This study is also consistent with the findings of Luijendijk RW et al¹⁶ In the remaining forty two cases with surgical scars, adhesion was suspected to be the cause of chronic pelvic pain⁷

In several reports the incidence of adhesions in patients evaluated for pelvic pain varies between 18% and 52%.¹² However, this is in contrast to our finding of only 3% cases of pelvic adhesion attributing to chronic pelvic pain. Pelvic pain in the presence of adhesion is due to restriction of the natural mobility or distensibility of other pelvic organs. More recent investigations¹⁸ demonstrate a relatively weak correlation between adhesions and chronic pelvic pain, much less than other factors such as psychosomatic symptoms and substance abuse.

We encountered 8% cases (n=113) with abnormal posture. Abnormal posture may lead to chronic muscle tension and strain on joints and ligaments, which then becomes a source of pain in itself. With physiotherapy ninety five patients had nearly complete relief of symptoms. However this is in contrast to King PM et al who quoted ' Myofascial pain component in up to 75% of patients who report CPP.¹⁷ This vast difference could be due to inadequate information in the case sheets, a common drawback of retrospective studies.

We encountered 8% cases (n=113) with abnormal posture. These patients did not sit with their back(spines) straight and many stood with their weight mainly on one foot. This probably resulted in chronic muscle tension and strain on joints and ligaments, which then becomes a source of pain. Moreover, the high heeled footwear used by majority in the young and reproductive age groups is not foot and spine

friendly. With physiotherapy ninety five patients had nearly complete relief of symptoms. However this is in contrast to King PM et al who quoted ' Myofascial pain component in up to 75% of patients who report CPP.¹⁷ This vast difference could be due to inadequate information in the case sheets, a common drawback of retrospective studies.

The four patients who had varicose veins in their vulval and inner thigh region had history of recurrent PID in the past and all were working in private companies. Pain in these cases may be due to pelvic congestion arising out of chronic pelvic inflammatory disease. Prolonged standing at work place might also be contributing to the genesis of varicosity and pelvic congestion. Two from this group showed signs of pelvic congestion in USG.

The precise aetiology of pelvic congestion syndrome is poorly understood. Some cases of pelvic varicosities have been associated with mechanical compressive causes, such as uterine malposition, causing kinking of the ovarian vein¹³ resulting in congestion.

Hormonal influences may also affect the development of pelvic congestion syndrome, as evidenced by the higher incidence of pelvic congestion syndrome in premenopausal women and the near-absence of symptomatic pelvic varicosities in postmenopausal women.

In some cases no cause could be identified in history or clinical examination. In these patients (n=84) ultrasound finding of endometriosis was seen which accounted for only 6% of the total patients with chronic pelvic pain although endometriosis is a frequently encountered incidental finding. Moreover, peritoneal implants do not localize to symptom location.¹⁰ The relatively less contribution of endometriosis could be due to exclusion of cyclic pain from the study.

Vulvodynia was seen in 6% of the patients. Many of them had associated urinary symptoms also. Trauma and infection during childbirth in reproductive age group may be responsible in sixty of these patients between 30-45 years age group whereas in the remaining twenty four patients between 59-70 years hypoestrogenic state could be responsible.

Prospective studies should be done by related specialities to unveil the etiology of chronic pelvic pain which is underdiagnosed most of the time. The biggest drawback of this study was that some data were missing in the case files.

Conclusion

Although there is a wide variation in the rates of chronic pelvic pain world wide, it appears to be highly prevalent (25%) in our part of the country. Clinicians often approach CPP from the perspective of their own specialty. As the analysis of risk factors for chronic pelvic pain is highly complicated owing to its multifactorial aetiology, the gynaecologists should develop the habit of looking beyond the uterus. Better still, management should be through a holistic multidisciplinary approach.

REFERENCES

1. Howard FM. The role of laparoscopy in chronic pelvic pain; promise and pitfalls. *Obstetrics and Gynecology* 1993; 48: 357-387.

2. Zondervan K, Barlow D. H. Epidemiology of chronic pelvic pain. *Baillieres Best Pract Res Clin Obstet Gynaecol.* 2000;14:403-14.
3. Ahangari A. Prevalence of chronic pain among women: An updated review. *Pain Physician* 2014;17:E141-7.
4. Jamieson DJ & Steege JF. The association of sexual abuse with pelvic pain complaints in a primary care population. *American Journal of Obstetrics and Gynecology* 1997; 177: 1408-1412.
5. Manning AP, Thompson WG, Heaton KW & Morris AF. Towards a positive diagnosis of the irritable bowel. *British Medical Journal* 1978; 2: 653-654.
6. Williams RE, Hartmann KE, Sandler RS, et al. Recognition and treatment of irritable bowel syndrome among women with chronic pelvic pain. *Am J Obstet Gynecol.* 2005;192:761-767.
7. Sanchez MI, Bercik P. Epidemiology and burden of chronic constipation. *Can J Gastroenterol* 2011;25: 11B-L 15B
8. Koziol JA, Carlk DC, Gittes RF & Tan EM. The natural history of interstitial cystitis: a survey of 374 patients. *Journal of Urology* 1993; 149: 465-469.
9. Wilkins EGL, Payne SR, Pead PJ et al. Interstitial cystitis and the urethral syndrome: a possible answer. *British Journal of Urology* 1989; 64: 39-44
10. Hsu AL, Sinaii N, Segars J, Nieman LK, Stratton P. Relating pelvic pain location to surgical findings of endometriosis. *Obstet Gynecol* 2011;118:223-30.
11. Luijendijk RW, Jeekel J, Storm RK et al. The low transverse Pfannenstiel incision and the prevalence of incisional hernia and nerve entrapment. *Annals of Surgery* 1997; 225: 365-369.
12. Vercelleni P, Fedele L, Molteni P, Arcaini L, Bianchi S. Laparoscopy in the diagnosis of gynaecological pelvic pain. *Int J Gynaecol Obstet* 1990; 32: 261-5.
13. Giacchetto C, Catizone F, Cotroneo GB, et al. Radiologic anatomy of the genital venous system in female patients with varicocele. *Surg Gynecol Obstet* 1989;169:403e7.
14. Prior A, Whorwell PJ & Faragher EB. Irritable bowel syndrome in the gynaecological clinic. Survey of 798 new referrals. *Digestive Diseases and Sciences* 1989; 34: 1820-1824.
15. Heim C, Ehlert U, Haker JP & Hellhammer DH. Abuse-related posttraumatic stress disorder and alterations of the hypothalamic-pituitary-adrenal axis in women with chronic pelvic pain. *Psychosomatic Medicine* 1998; 60: 309-318.
16. Luijendijk RW, Jeekel J, Storm RK et al. The low transverse Pfannenstiel incision and the prevalence of incisional hernia and nerve entrapment. *Annals of Surgery* 1997; 225: 365-369.
17. King PM, Myers CA, Ling FW, et al. Musculoskeletal factors in chronic pelvic pain. *J Psychosom Obstet Gynaecol.* 1991;12:87-98.
18. Latthe P, Mignini L, Gray R, Hills R, Khan K. Factors predisposing women to chronic pelvic pain: systematic review. *BMJ* 2006;332:749-55
19. J Moore, S Kennedy. Causes of chronic pelvic pain: *Bailliere's Clinical Obstetrics and Gynaecology* 2000;14:389-402
20. American College of Obstetricians and Gynecologists

Committee on Practice Bulletins—Gynecology. ACOG practice bulletin no. 51. Chronic pelvic pain. *Obstet Gynecol.* 2004;103:589-605.

Source of Support: Nil; **Conflict of Interest:** None

Submitted: 26-06-2019; **Accepted:** 27-07-2019; **Published:** 23-08-2019