

PELVIC INFLAMMATORY DISEASE: HOW FREQUENT IT IS AMONG THE WOMEN PRESENTING WITH LOW BACK PAIN

¹Dr. Vipin Garg, ²Dr. Parul Trichal, ³Dr. Vijendra Damor, ⁴Dr. Pradeep Dubey,
⁵Dr. Roma Sharma

¹Assistant Professor, Department of Orthopaedics, GRMC, Gwalior, M.P

²Assistant Professor, Department of Obstetrics & gynaecology, Government Medical College, Ratlam, M.P

³Assistant Professor, Department of Orthopaedics, Government Medical College, Ratlam, M.P

⁴Assistant Professor, Department of Orthopaedics, Government Medical College, Ratlam, M.P

⁵ Senior Resident, Department of Obstetrics & gynaecology, Government Medical College, Ratlam, M.P

Corresponding Author:

Dr. Pradeep Dubey

Drpradeepdubey85@gmail.com

ABSTRACT

Background: Low backache (LBA) in females is a major public health problem world-wide and treating this condition is also challenging due to its vast differential diagnosis. Pelvic inflammatory disease (PID) is the most frequently encountered condition in females for LBA and if diagnosed and treated early can lead to significant improvement in symptoms of LBA.

Aim: The present study is conducted to determine the incidence of Pelvic inflammatory disease (PID) and its associated risk factors in women with complaints of low back pain (LBP).

Material and Methods: A prospective epidemiological study was done in the department of orthopedics in GRMC Gwalior, M.P. 400 female patients attending OPD with the presenting complaint of LBP were enrolled in our study. Detailed history was taken and thorough examination was done.

Results: Out of 400 patients with LBA, PID was found in 324 (81%) patients. Maximum number (32%) of patients was from the age group of 41- 50 years. Majority of patients (60.7%) were of low socio-economic status, 51.7% females were illiterate, 69% females were overweight 31.8% of patients complained of vaginal discharge were age group of 41-50 years. 37.4% women used oral contraceptive pills and 58.1% females had an intrauterine contraceptive device inserted. Majority of the PID patients (53.4%) showed inflammatory cell on Pap smear

Conclusion: The present study suggests that PID is a major contributing factor in LBP in middle age females.

Keywords: Low back pain, PID, vaginal discharge, PAP smear

INTRODUCTION

Low back pain (LBP) is an emerging public health problem all over the world. There has been growing concern about low back pain in the western society [1]. In India most of the people

(almost 60%) suffer devastating back pain at some stages in their lives [2]. Prevalence of low back pain in India has been found to range from 6.2% to 92%, with increase of prevalence with age and showing female preponderance [3]. Causes of LBP are gynecologic, vascular, neurologic, psychogenic, spondylogenic or discogenic pathology. But mostly the cause remains unidentifiable and is encompassed under the umbrella term—mechanical or postural back pain [4]. Incidence of LBP is more in female may be due to female muscular and ligamentary supports are not as strong as of males. Further, during pregnancy and labor the mobility of the pelvic girdle exposes the muscles and ligaments to undue strains which after delivery involutes suboptimally. A higher number of live births are suggested to be associated with LBA [5]. Pelvic inflammatory disease (PID) is an infection of female genital tract, including uterus, fallopian tubes and ovaries, which may spread to contiguous pelvic structures and present with pain, abnormal or excessive discharge, lower backache, lower abdominal ache, associated fever, vulval itching and burning [6-7]. PID affects predominately in the reproductive age years with its highest prevalence being in the second and third decades [8]. Risk factors for PID are the same as those for acquisition of sexually transmitted diseases: multiple sexual partners, young age, smoking, and illicit drug use [9]. PID is an important public health problem in all women but seldom identified in the postmenopausal females [10] A definitive diagnosis of PID is done by laparoscopic visualization of inflamed, purulent fallopian tubes; PID is generally a clinical diagnosis and thus represents a diagnostic challenge [11] The essential step in the management of LBA is to determine the cause by meticulous, detailed history and examination including pelvic examination. Radiological and sometimes MRI is useful in evaluation.

Aim of the present study was to determine the incidence of PID among the female patients presenting with complaint of Low back pain.

MATERIAL AND METHODS

This is a prospective analytical study was carried out in the department of orthopedics in Gajara Raja Medical College, Gwalior, M.P. A total of 400 female patients attending Orthopaedic/obstetrics and gynecology OPD with chief complaints of low back pain were enrolled in the study. All patients initially evaluated to elicit the underlying cause of low back pain specially PID.

Inclusion criteria: All age group female patients presenting with low back pain

Exclusion criteria: Male patients, Patients with evidence of sub acute/chronic osteomyelitis, including tubercular lesions; inflammatory arthropathy; Disc prolapse; Traumatic causes of Low back pain; Neuropathies & Spinal pathologies causing Low back pain.

Written informed consent was taken for all the study participants. A detail history and thoroughly clinically examined was done in presence of female attendant. Then relevant blood reports (CBC, ESR, urine R/M, urine culture and cervical Pap smear) and radiological investigations (X- ray spine and Ultrasound of lower abdomen and pelvis) were done. Diagnosis of PID was made on the basis of clinical sign/symptoms and relevant investigations.

Statistical Analysis: all parameter were analysed statistically. The value of $p < 0.05$ was considered as significant for this study

RESULTS

A total of 400 female patients presenting with low back pain in our OPD were evaluated for Pelvic inflammatory disease (PID). Most of the (32%) low back pain patients were age group of 41-50 years. Detail age group distribution was shown in table: 1.

Table 1: Age distribution of the patients presented with Low back Pain

Age in years	No of patients	Percentage
20-30	54	13.5
31-40	99	24.7
41-50	128	32
51-60	77	19.3
>60	42	10.5

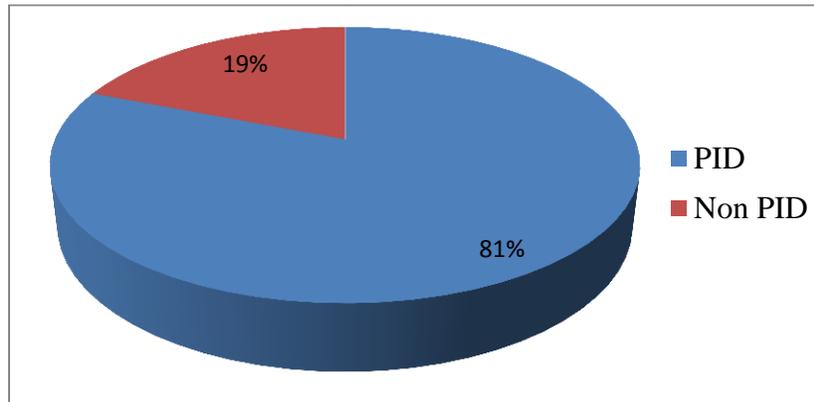
Majority of the patients 60.7% belonged to low socio-economic status. Most of them were illiterate comprising 51.7% of the total study population. Though maximum number of patients 304 (76%) were satisfied by their work they were doing, may be its household work or any kind of employment. In the present study majority of them 166 (41.5%) were pre-obese category, 124 (31%) was non-obese and 110 patients (27.5%) were obese. Predominantly 368 (92%) low back pain female patients were non smoker [table: 2].

Table 2: Socio-demographic variables of the patients presenting with Low back pain

Variable	No of patients	Percentage
Socio-economic status		
Low	243	60.7
Middle	129	32.3
High	28	7
Educational status		
Illiterate	207	51.7
Literate	193	48.3
Work satisfaction status		
Satisfied with work	304	76
Unsatisfied with work	96	24
Body Mass Index (BMI)		
Non-obese(BMI \leq 25)	124	31
Pre-obese(BMI 25-29.9)	166	41.5
Obese (BMI \geq 30)	110	27.5
Smoking status		
Smoker	32	8
Non smoker	368	92

Out of total 400 low back pain patients, PID was diagnosed in 324 (82%) of cases [figure: 1].

Figure 1: Incidence of PID in low back pain patients



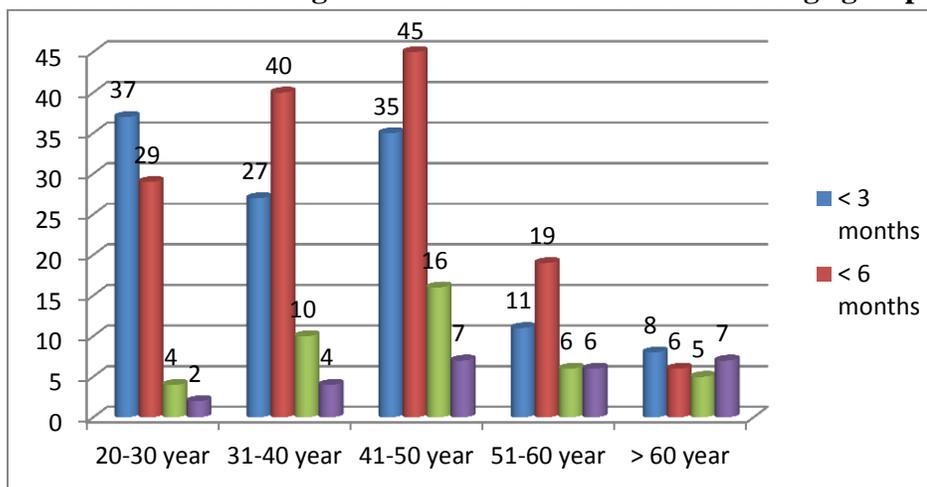
In our study majority of the PID patients 58.1% gave history of using intra uterine contraceptive device (IUD), whereas only 121 (37.4%) gave history of using oral contraceptive pill [table: 3].

Table 3: Association between PID and birth control methods

Contraceptive method		
Oral contraceptive pills status	Number	Percentage
Used OCP	121	37.4
Not used OCP	203	62.6
Intra-uterine device status		
Used IUD	188	58.1
Not used IUD	136	41.9

Maximum number of PID patients 103 (31.8%) presented with complaint of low back pain along with vaginal discharge belonged to the age group of 41-50 years. Duration of the vaginal discharge were <3 and <6 months in most of the PID patients [Figure: 2].

Figure 1: Duration of discharge in PID associated with different age group



Pap smear report showed presence of inflammatory cells in 173 patients (53.4%) of PID patients. No Pap smear report showed any features of dysplasia or malignancy [table:4].

Table 4: Pap smear report of the patients with PID

Pap smear report	Number	Percentage
Inflammatory cells	173	53.4
Non inflammatory cells	151	46.6
Total	324	100

DISCUSSION:

The incidence of low back pain was higher among 41-50 years age group female patients in our current study, comparable with the study conducted by Bindra S, et al [12] and Minakshi S *et al* [13] also reported incidence of backache increase with the age, whereas Ayorinde A et al [14] observed prevalence of chronic low back pain was higher among reproductive age group, this variation may be due to Influences of psychological factors and many other factors associated with low back pain.

Present study observed 60.7% were belonged to low socio-economic status and 51.7% female were found to be illiterate, our finding was consistent with Wáng et al [15] and Mathew et al [16], study also reported increased incidence of low back pain among the people of low socioeconomic status.

In our study BMI of low back pain female were overweight in 69% population (41.5% was pre-obese and 27.5% were obese category) concordance with the Siddharth Goel et al [17] and Shiri R et al [18]. Obesity is known to increase both the direct vertebra compressive load on the spine and the anteriorly acting loads, which through the action of the muscles creates very large joint reaction forces.

In our study, Out of 400 patients only 24% reported that they were not satisfied with their job, whereas majority (76.0%) was satisfied with their work. Hoogendoorn et al [19] study revealed that low social support in the workplace and low job satisfaction are risk factors for low back pain

Current study observed no significant association between smoking and low back pain, only 8% of low back pain female patients were smoker, accordance to the Samreen Khan et al [20].

Very higher incidence (81%) of PID among low back pain female patients was found in present study, which was comparable with the Bansal N et al [21] and Ghosh S et al [22] reported incidence of PID were 64% and 78% respectively.

Among PID patients 37.4% female using oral contraceptive pills and 58.1% using intrauterine device for prolonged period in the current study, similar to other studies Martin V et al [23] and Steen R et al [24] showed that incidence of PID was more in contraceptive user especially in IUD users. PID among IUD users is most strongly related to insertion process and to the background risk of sexually transmissible disease.

Majority of the diagnosed PID patients who had vaginal discharge (mainly <3 to 6 months duration) along with low back pain belonged to the age group of 41-50 years, which was concordance to the results of Sachdeva PK et al [25]

Pap smear of PID patients found inflammatory cells was 173 (53.4%) in the present study. which was accordance to the Verma et al [26] and Mishra et al [27].

CONCLUSION

The present study suggests that Pelvic inflammatory disease is the leading cause of low backache in middle age female patients. Many variables like high BMI, low socio-economic status, educational status, prolonged duration at work and contraceptives methods associated with the low back pain. Early diagnosis and treatment of PID will lead to early alleviation of symptoms of low backache (LBA) thus leading to decrease in morbidity in females which hampers their day to day activities.

Conflict of interest: none

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