

Prevalence of Lower Back Pain in Pregnant Women with Pre-Eclampsia

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ABSTRACT

Objective: The aim of this study is to determine the prevalence of lower back pain in pregnant women with pre-eclampsia.

Study Design: Cross sectional study

Place and Duration: Mardan Medical Complex/BKMC, Tahseel Headquarter Hospital, Takht Bhai Mardan, Swabi Medical Complex /GKMC, from October 2019 to October 2021.

Methods: Total 160 pregnant women were presented in this study. Patients were aged between 18-45 years. Detailed demographics of enrolled cases age, body mass index, gestational age, and residency and education status were calculated after taking informed written consent. Patients were divided into two groups. Group I had 80 patients with pre-eclampsia and group II had 80 patients with normotensive. Gravidity among both groups was assessed. Symptoms and prevalence of lower back pain among both groups were assessed and compared. Complete data was analyzed by SPSS 22.0 version.

Results: Mean age of the patients in group I was 27.09 ± 5.66 years with mean gestational age 33.14 ± 7.41 weeks while in group II mean age was 26.55 ± 8.26 years with mean gestational age 32.47 ± 8.33 weeks. Thirty seven patients (46.3%) in group I was primigravida and 40 (50%) in group II was primigravida. Thirty nine patients (48.8%) had urban residency in group I and in group II thirty seven (46.3%) cases were from urban area. Frequency of literacy among both groups were 42 (52.5%) and 44 (55%). Prevalence of lower back pain in group I was 55 (68.8%) higher as compared to group II 53 (66.3%) with no any significant difference. Domestic work was the most common cause among both groups followed by social work (Job), lifting of heavy object and medication pain.

Conclusion: We concluded in this study the prevalence of lower back pain among pregnant women was significantly high among both pre-eclampsia and normotensive cases. Most common causes of lower back among women was domestic work. Health professionals must be proactive in diagnosing LBP and providing proper management due to the enormous impact of it on the quality of life.

Keywords: Pregnant Women, Low Back Pain, Prevalence, Symptoms, causes.

INTRODUCTION

When it comes to pregnancy, low back pain (LBP) is a typical complaint among women, and it has a significant impact on their quality of life. The symptoms of low back pain during pregnancy have been known and recognized for many years and have been described by Hippocrates, Vesalius, Pineau, Hunter, Velpeau, and numerous other medical professionals and researchers. Walde was the first to discover the differences between Pelvic Girdle Pain (PGP) and Lumbar Pain (LBP) in 1962, when he published his findings (LP). Later, Ostgaard and colleagues established the criteria for distinguishing between the two entities in question [1]. An estimated 50 percent of pregnant women will experience some degree of low back discomfort at some point throughout their pregnancies or during the postpartum period, according to research. [2,3] Pregnancy-related low back discomfort appears to be caused by a variety of reasons, including mechanical, hormonal, and non-mechanical ones [4,5].

PGP and LP are two distinct forms of low back pain that can occur during pregnancy, however a tiny number of women experience both at the same time. PGP is widespread during pregnancy and the postpartum period, and it is approximately four times as common as low-grade

prenatal depression (LP). A deep, stabbing pain that can be felt in either the unilateral or bilateral hip region, or that can be recurrent or continuous, is described as occurring between the posterior iliac crest and the gluteal fold and perhaps spreading to the posterolateral thigh, knee, and calf, but not to the foot. Pregnancy-induced gastroparesis (PGP) is more intense during pregnancy than during postpartum period, and it has the potential to transform the natural discomfort of pregnancy into a pathophysiologic illness that reduces physical activity and induces withdrawal from social interactions [7].

Pain provocation tests are the most accurate testing now available for distinguishing PGP from other illnesses in patients. In the case of PGP, the posterior pain provocation test (PPPT) results in a positive result. Pregnancy-related lumbar pain (LP) is remarkably similar to lumbar pain experienced by women who are not pregnant. It manifests as discomfort over and around the lumbar spine, above the sacrum, making the distinction between PGP and LP easy to make. In contrast to PGP, LP may or may not radiate to the foot, depending on the situation. The presence of tenderness over the paravertebral muscles is prevalent. Although LP worsens during the postpartum period and is typically exacerbated by particular activities and postures

(for example, prolonged sitting), it appears to be less disabling than PGP. [9] No pain is induced in the posterior region during the posterior pain provocation test. The characterization of low back pain in pregnancy [10], the identification of appropriate investigations [11,12], and the consideration of safe treatment choices in pregnancy [13,14] are all areas where there is still substantial ambiguity. In comparison to LBP in non-pregnant individuals, these factors are more specific to pregnant women. The aim to avoid ionizing radiation exposure to the fetus influences the choice of imaging methods for examining low back pain during pregnancy. The use of conservative treatment regimens is also dictated by concerns about the well-being of the mother and the fetus [15].

Purpose of this study is to determine the prevalence of lower back pain in pregnant women with pre-eclampsia.

MATERIAL AND METHODS

This cross-sectional study was conducted at Mardan Medical Complex, Tehsil Headquarters Hospital Takht Bhai and Sawabi Medical Complex Shah Mansoor. The study was comprised of 160 pregnant women. Detailed demographics of enrolled women were calculated after taking informed written consent. Patients had severe medical illness and those did not give any written consent were excluded from this study.

Patients were aged between 18-45 years. Patients had low back pain with eclampsia and normotensive were included. Fluoroscopy (X-ray), CT, MRI, ultrasonography, and electrodiagnostic tests such as electromyography (EMG) and nerve conduction studies were used to diagnose LBP during pregnancy (NCS). Among the treatment options for LBP during pregnancy are physical therapy, patient education, and psychological therapies, as well as complementary treatments (such as mechanical supports, osteopathic manipulative treatment [OMT], water gymnastics, yoga, acupuncture, and transcutaneous electrical nerve stimulation [TENS]), as well as interventional techniques such as injections (kyphoplasty, vertebroplasty, and laminectomy). Spinal, epidural, and spinal-epidural procedures all fall under the category of neuraxial analgesia and anaesthesia for the purposes of easing labor and delivery in women who have LBP. Due to the high prevalence of LBP in this group, we also included patients who had previously undergone spinal surgery or had spinal implants (such as spinal cord stimulators [SCS]).

Patients were divided into two groups. Group I had 80 patients with pre-eclampsia and group II had 80 patients with normotensive. Gravidity among both groups was assessed. Symptoms and prevalence of lower back pain among both groups were assessed and compared. Complete data was analyzed by SPSS 22.0 version. Categorical variables were assessed by frequencies and percentages.

RESULTS

Mean age of the patients in group I was 27.09±5.66 years with mean gestational age 33.14±7.41 weeks while in group II mean age was 26.55±8.26 years with mean gestational age 32.47±8.33 weeks. Thirty seven (46.3%) females in group I was primigravida and 40 (50%) in group

II was primigravida. Thirty nine patients (48.8%) had urban residency in group I and in group II 37 (46.3%) cases were from urban area. Frequency of literacy among both groups were 42 (52.5%) and 44 (55%).(table 1)

Table 1: Baseline details of enrolled cases

Variables	Group I (n=80)	Group II (n=80)
Mean age (years)	27.09±5.66	26.55±8.26
Mean gestational age (weeks)	33.14±7.41	32.47±8.33
Gravidity		
Primigravida	37 (46.3%)	40 (50%)
Multigravida	43 (53.7%)	40 (50%)
Residency		
Urban	39 (48.8%)	37 (46.3%)
Rural		
Education Status		
Literate	42 (52.5%)	44 (55%)
Illiterate	38 (47.5%)	36 (45%)
Job Status		
Yes	36 (45)	35 (43.8%)
No	44 (55%)	45 (46.2%)

Prevalence of lower back pain in group I was 55 (68.8%) higher as compared to group II 53 (66.3%) with no any significant difference observed in this study.(table 2)

Table 2: Prevalence of lower back pain among both groups

Variables	Group I (n=80)	Group II (n=80)
Lower Back Pain (LBP)		
Yes	55 (68.8%)	53 (66.3%)
No	25 (31.2%)	27 (33.7%)

Domestic work was the most common symptom among both groups followed by social work (Job), lifting of heavy object and medication pain.(table 3)

Table 3: Symptoms of LBP among both groups

Variables	Group I (n=55)	Group II (53)
Lower Back Pain		
Domestic work	22 (40%)	20 (37.8%)
Social work	16 (29.1%)	18 (33.96%)
Stretching (lift of heavy object)	13 (23.6%)	12 (22.6%)
Medication pain	4 (7.3%)	3 (5.7%)

DISCUSSION

During pregnancy, a woman's body goes through a lot of changes, both anatomically and physiologically. These modifications have an impact on the musculoskeletal system, resulting in lower back pain and discomfort [16]. There have been numerous research done on LBP in pregnant women from diverse ethnic groups. However, the matter is still debatable, and nothing is known about its etiology. Pregnancy-related low back pain has been explained in several ways, but empirical evidence for any of these hypotheses has not yet been established.

In this cross-sectional 160 pregnant women were presented. Patients were divided into two groups. Group I had 80 patients with pre-eclampsia and group II had 80 patients with normotensive. Mean age of the patients in group I was 27.09±5.66 years with mean gestational age 33.14±7.41 weeks while in group II mean age was 26.55±8.26 years with mean gestational age 32.47±8.33 weeks. Thirty seven (46.3%) females in group I was primigravida and 40 (50%) in group II was primigravida.

Our findings were comparable to the previous some studies [17,18]. Thirty nine(48.8%) had urban residency in group I and in group II 37 (46.3%) cases were from urban area. Frequency of literacy among both groups were 42 (52.5%) and 44 (55%)[19].

We found that prevalence of lower back pain in group I was 55 (68.8%) higher as compared to group II 53 (66.3%) with no any significant difference observed in this study. This study's findings were compared to those of an Ethiopian study published just last year on pregnancy-related low back pain. [20] Our findings, on the other hand, are in line with those of a 2017 Brazilian study, which found a prevalence of LBP of 68%. [21] These findings support those of Emilia et al. and Ferreira et al., who also conducted research on low back pain during pregnancy. [21,22] This finding explains LBP as a result of changes in the musculoskeletal system, including as postural changes, increased spinal load caused by the growing fetus, and exacerbated lordosis, which put physical stress on the joints of the spine and lead to dysfunction [22,23]. According to a recent study from Western Nepal, back pain is one of the most prevalent pregnancy problems (along with morning sickness and preeclampsia) [24]. A similar study conducted in another developing nation found that both LBP and PGP were frequently experienced by women who were pregnant [25].

In current study domestic work was the most common cause among both groups followed by social work (Job), lifting of heavy object and medication pain[26]. When a pregnant woman has low back discomfort, she has trouble performing daily tasks including self-care, walking, sitting, and engaging in sexual activities. Pregnancy-related functional impairments are linked to lower quality of life and productivity. Gutke et al. found similar results, reporting that 73% of Norwegian pregnant women had mobility issues as a result of LBP and PGP [27]. According to our data, roughly 64% of pregnant women in central Portugal did not seek treatment for their LBP because they were unaware of the resources available to them and believed that LBP was a natural part of pregnancy [28]. LBP in pregnancy can be prevented and managed with evidence-based therapies.

CONCLUSION

We concluded in this study the prevalence of lower back pain among pregnant women was significantly high among both pre-eclampsia and normotensive cases. Most common symptom of lower back among women was domestic work. It can be Health professionals must be proactive in diagnosing LBP and providing proper management due to the enormous impact it has on quality of life.

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