

A Study of Frequency of Low Backache in Pregnant Women

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ABSTRACT

Objective: To find the frequency of backache in our pregnant women and factors increasing the risk of low backache in pregnancy.

Study Design: Prospective longitudinal study.

Place and Duration of Study: Department of Gynecology & Obstetrics, Avicenna Medical College, Lahore Pakistan, from Jan 2018 to Dec 2019.

Methodology: We included 247 consecutive women between 18 and 45 years of age and between 16 and 35 weeks of a single pregnancy. These were evaluated for low backache. Women with comorbid conditions and multiple fetuses who needed elective caesarian sections were excluded.

Results: Mean age of the pregnant women in our study was 27 ± 3.7 years, with an age range of 18 to 45 years. 197 (80.1%) complained about low back pain during their pregnancy, and 75 (30.3%) had a previous history of back pain when not pregnant. Back pain was present in 47 (19.02%) 6 months postpartum. The risk factors present were higher weight gain in 75 (30%), age >35 years in 62 (25%), low haemoglobin 38 (15%) and poor socio-economic condition 25 (10.1%).

Conclusion: Low back pain is common in pregnancy and is a less addressed issue of pregnant women. Many factors responsible for low backache in pregnant women were identified. Analgesics and increased physical activity are the main treatment and prevention options.

Keywords: Backache, Pregnancy-related back pain, Quality of life.

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INTRODUCTION

Low back pain is a prevalent condition in pregnancy. The complaints of lower backache increase as pregnancy advances. The reported prevalence of the lower backache in pregnancy is 30-70%.¹ The lower backache can become so disturbing that it disturbs the daily routines and activities of patients.² The lower backache recurs in subsequent pregnancies. Despite such a high prevalence, half of the pregnant ladies with low backache women were offered significantly less treatment by the treating physicians.

In pregnancy, the risk factors for lower back pain include weight gain, previous lower back pain, lack of physical activity, fatigue, low haemoglobin levels, and poor socio-economic conditions.³ The probable mechanism for lower back pain in pregnancy is that increased lumbar lordosis in pregnancy causes alteration in posture and inefficient neuromuscular control.⁴ A study conducted by Shim MJ finds that in 10% of women, low backache persisted 18 months after

delivery.⁵

Various kinds of management strategies are used for low backache in pregnancy. Usually, pregnant women are taught that low back pain is a normal part of pregnancy, and this pain will subside itself after delivery.⁶ Pain management includes rest, physiotherapy, local application of hot and cold packs, herbal products, yoga, meditation, and pharmacological agents.⁷

The low back pain in pregnancy is not very well understood. Our local scenario has very limited data on the factors resulting in low backache in pregnancy. Our study aims to find the frequency of backache in pregnant women and the factors increasing the risk of low backache in pregnancy. This study will help establish our local guidelines for assessment, treatment and prevention strategies of low backache in pregnant women.

METHODOLOGY

This prospective longitudinal study was conducted at the Department of Gynecology & Obstetrics, Avicenna Medical College, Lahore, from January 2018 to December 2019. All women were explained about

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the study and included in the study after informed consent. Ethical committee permission was obtained (Ser No.23).

Inclusion Criteria: Pregnant women of 18 to 45 years of age and between 16 to 35 weeks of a single pregnancy were included in the study.

Exclusion Criteria: Women with comorbid conditions such as hypertension, diabetes mellitus and any cardiac problem were excluded from the study. Women who needed caesarean section or episiotomy or had twin, triplets, or more pregnancies were excluded from the study.

All the patients were asked for history, and after clinical examination, appropriate investigations were done. All findings were recorded. WHO sample size calculator was used. A population prevalence of 30 % was taken from a study conducted by Robinson *et al.*¹ A total size of 323 was calculated. However, only 247 patients participated till the end of the study. This study used convenient sampling, included consecutive pregnant women presenting to Gynecology and Obstetrics Department for their antenatal care, and was evaluated for low back pain. After six months of delivery, a survey was conducted of those women who reported low backache in the initial antenatal survey based on the Liddle review.⁸

Statistical Package for Social Sciences (SPSS) version 21.0 was used for the data analysis. Frequency was calculated for backache and its different risk factors such as weight gain, physical inactivity, previous low backache, low haemoglobin level and socio-economic condition. Mean and standard deviation was calculated for age and weight.

RESULTS

A total of 247 patients were included in the study. The mean age of the pregnant women in our study was 27 ± 3.7 years Table-I.

Table-I: Demographic features of pregnant women (n=247).

Variables	Mean and Standard Deviation	Range
Age (Years)	27.2 (± 3.7)	18-45
Gestational Age at the Time of Inclusion (Months)	6.7 (± 2.1)	3rd-9th
Weight (kg)	73 (± 7.79)	57-120
Height (cm)	152 (± 9.1)	148-180
Previous Pregnancies	2.1 (± 1)	1-4

197 (80.1%) complained about low back pain during pregnancy, and 75 (30.3%) had a previous history of back pain. Back pain was present in 47 (19.02%)

6 months postpartum. The risk factors showed that the occurrence of backache was more in women with higher weight gain 75 (30%), age >35 years in 62 (25%), low haemoglobin 38 (15%) and poor socioeconomic condition 25 (10.1%) (Table-II).

Table-II: Risk Factors (n=247).

Factors	Number of Patients (%age)
Low Back Ache	197 (80.1%)
Age	
<35 years	13 (5.26 %)
>35 years	62 (25.1 %)
Increase in weight	
6 kg	17 (6.88 %)
12kg	24 (9.71 %)
More than 12 kg	75 (30.36 %)
Previous backache history	62 (25.1 %)
Hemoglobin level	
8 (g/dL)	38 (15.38%)
10 (g/dL)	13 (5.26%)
12 (g/dL)	7 (2.83%)
Poor Socio economic status	25 (10.1%)
Post-partum pain	47 (19.02%)

In our study, 185 (74.89%) used Acetaminophen, 30 (12.1%) used Diclofenac Sodium, 25 (10.1%) used Tramadol, and 7 (2.83%) used Aspirin as an analgesic. In 30 (12.1%), the pain was improved due to physiotherapy. At the same time, hot and cold compresses and light exercise were performed in 247 (100%) and felt improvement (Table-III). There was no mortality in our study.

Table-III: Management done (n=247).

Treatment	No of Patients (% age)
Acetaminophen	185 (74.89%)
Diclofenac Sodium	30 (12.1%)
Tramadol	25 (10.1%)
Aspirin	7 (2.83 %)
Hot & Cold Compresses	247 (100%)
Physiotherapy	30 (12.1%)
Light Exercises	247 (100%)

DISCUSSION

Low back pain is one of the common conditions occurring during pregnancy that begins at the end of the second trimester. It is estimated 71.7% of women suffer from that low back pain and pelvic pain during their pregnancies.⁹ Low back pain during pregnancy is considered lumbar pain, pelvic pain, or a combination of both.¹⁰ These pains are common in pregnancies and usually considered the sequel of pregnancy, and that is why this low backache or other hip and legs pain are not investigated.¹¹

Studies indicate lower back pain during pregnancy is associated with an increase in age, Europeans, Afro Americans, prior backache in normal life and backache in periods and previous pregnancies.¹² The factors with less association with low back in pregnancy are Asians and Hispanic ethnicity, obesity, exercise, use of oral contraceptives, caffeine, tobacco, parity, and hormonal therapy for infertility.¹³ Low back pain in pregnancy can be very disabling, and this leads to absence from work in 10% of patients.¹⁴ As a result of low backache in pregnancy the risk of low backache in later life and incoming pregnancies increases by 15-30 %.¹⁵

Despite several women involved with this condition, the treating physicians are not trained in this aspect of low backache management in pregnancy.¹⁶ Usually, pain management teams send these women home, avoid pain management for low backache, and refer these women back to the obstetrical team.¹⁷ Low back pain remains a problem in some 21.1% of women even 2 to 3 years after pregnancy.¹⁸ In these patients commonest differential is Herniated lumbar discs and which should always be included in the workup after pregnancy is over.¹⁹

The mainstay of treatment is pharmacological or non-pharmacological, but there are no general guidelines for managing low backache in pregnancy. Commonly prescribed medicines for low backache in pregnancy are opioids and Acetaminophen.²⁰ There is a rise of 33.9% in opioid treatment during the first trimester from 1995 to 2009 for non-malignant analgesic use, which shows that opioids widely treat low backache in pregnancy. However, these are not first-line treatments in pregnancy.²¹ Acetaminophen is commonest over the counter medicine for low back pain treatment in pregnancy.²² Other pharmacological options are Aspirin and NSAIDs.²³ Patient education, massage therapy, physiotherapy, light exercises, TENS, craniosacral therapy, osteomanipulative therapy, multi-modal intervention, and acupuncture are some examples of non-pharmacological treatment.²³

In our study, low back pain was present in 80.1% of pregnant women, and 30.3% had backache in routine life. Back pain was present in 19.02% of women six months postpartum. In our study, more weight gain was responsible for back pain in 30% of pregnant women, while 25% of women with low backache were older than 35. Low haemoglobin was found in 15% of the pregnant women, and low socio-economic

condition was responsible for low backache in 10 % of pregnant women.

The usually reported incidence is between 30-70%, and our study points to a higher incidence of low backache in pregnant women. The reason for this high incidence could be multifactorial. Low socioeconomic conditions, low haemoglobin, lack of physical activity, poor treatment of previous back pain or other medical conditions. Bastiaanssen showed a similar result: a higher incidence of low backache in pregnancies after 35 years of age. 24 Tseng *et al*, pointed similar association between low haemoglobin levels and socio-economic conditions responsible for low backache in pregnant women.¹¹

In our study, we used both pharmacological and non-pharmacological treatment. Acetaminophen was the most common medical use to alleviate the pain, followed by NSAIDs. Tramadol was used in only 10 % of the patients. All patients have been advised light exercises and hot and cold compresses. A 2013 Cochrane review found some role of acupuncture and exercise in managing low backache in pregnancy. 25 Another review by the same author, which was published in the Cochrane database in 2015, found out that exercise had little role in the management of low back pain but had some role in improving the functional disability of these pregnant women.^{24,25}

Our study was concerned about the incidence and factors responsible for the low backache in pregnant women. This study gave a very good insight into low backache in pregnant women in our community. Further studies are needed with a larger sample and treatment options considered.

CONCLUSION

Low back pain is a common condition in pregnancy and is a less addressed issue of pregnant women. Many factors responsible for low backache in pregnant women were identified. Analgesics and increased physical activity are the main treatment and prevention options.

Conflict of Interest: None.

Authors' Contribution

SFS: Study design, SNM: Writing study, BAK:, SHS:, MWK:, AQK: Data collection.

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