

ORIGINAL ARTICLE**Evaluation of risk factors in developing pregnancy-related pelvic girdle pain**

Amita Bharti

Assistant Professor, Department of Obstetrics & Gynaecology, Major S D Singh Medical College & Hospital, Farukhabad, Uttar Pradesh, India

ABSTRACT:

Background: Numerous physiological and biomechanical changes are linked to pregnancy. These alterations result in a variety of musculoskeletal issues. The present study was conducted to assess risk factors in developing pregnancy-related pelvic girdle pain. **Materials & Methods:** 85 pregnant women with 33 weeks of gestation were divided into 4 groups. Group I was pelvic girdle syndrome, group II was symphysiolysis, group III was one-sided sacroiliac syndrome, group IV was healthy group. Risk factors were recorded. **Results:** Group I had 18, group II had 20, group III had 25, group IV had 22 subjects. In group I, group II, group III and group IV risk factors were previous low back pain seen in 76%, 32%, 45% and 14% respectively. Other factors were trauma of the back or pelvis in 80%, 40%, 32% and 23%, higher level of stress in 72%, 30%, 50% and 11%, low job satisfaction in 60%, 13%, 28%, and 41%. Contraceptive pills in 55%, 20%, 19% and 30%, multiparae in 70%, 35%, 21% and 15% and BMI > 30 in 50%, 11%, 10% and 7% women respectively. The difference was significant ($P < 0.05$). **Conclusion:** Risk factors for pregnancy-related pelvic girdle pain was previous low back pain, trauma of the back or pelvis, higher level of stress, low job satisfaction, contraceptive pills and multiparae.

Keywords: multiparae, pelvic girdle pain, pregnancy

Corresponding author: Amita Bharti, Assistant Professor, Department of Obstetrics & Gynaecology, Major S D Singh Medical College & Hospital, Farukhabad, Uttar Pradesh, India

This article may be cited as: Bharti A. Evaluation of risk factors in developing pregnancy-related pelvic girdle pain. J Adv Med Dent Sci Res 2017;5(3):212-214.

INTRODUCTION

Numerous physiological and biomechanical changes are linked to pregnancy. These alterations result in a variety of musculoskeletal issues.¹ Of them, pelvic girdle pain associated to pregnancy has been extensively researched. About one-third of pregnant women have low back pain and pregnancy-related pelvic girdle pain (PPGP), which are extremely frequent conditions that make it difficult for them to go about their daily lives normally.² Back pain associated with pregnancy includes both pelvic girdle pain (PPGP) and low back pain (PLBP), as well as their combinations.³ Pelvic pain originates in the pelvic region, usually in the sacroiliac joints, while pelvic lumbar pain originates in the lumbar spine. When it is impossible to distinguish between pelvic pain and PPGP, the condition is referred to as lumbopelvic pain.⁴

According to European guidelines on the diagnosis and management of pelvic girdle pain, pelvic girdle pain (PPGP) is characterized by discomfort that is typically felt close to the sacroiliac joints, frequently between the posterior iliac crest and the gluteal fold.⁵ The discomfort might originate in the posterior thigh and manifest either alone or in combination with the symphysis. Research has shown that PPGP is a typical symptom among pregnant women in the European population, with an average reported prevalence of 45.3% for pelvic girdle and low back pain connected

to pregnancy.⁶ The present study was conducted to assess risk factors in developing pregnancy-related pelvic girdle pain.

MATERIALS & METHODS

The present study consisted of 85 pregnant women with 33 weeks of gestation. All gave their written consent to participate in the study.

Data such as name, age, etc. was recorded. Subjects were divided into 4 groups. Group I was pelvic girdle syndrome, group II was symphysiolysis, group III was one-sided sacroiliac syndrome, group IV was healthy group. Parameters such as age, height, weight during pregnancy, present weight, and cigarette use. Obstetric history includes the number of prior pregnancies, the number of forced and spontaneous abortions, the number of deliveries, the duration since the last delivery, and the number of live and stillborn infants. Hormone-induced pregnancy, contraceptive pill use in the final six months prior to conception, and salpingitis or bladder infection within the year prior to conception was recorded. Previous history of low back pain or pelvis: low back pain in the year before to becoming pregnant; back or pelvic injuries that required visiting an emergency room etc. was recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of subjects

Groups	Group I	Group II	Group III	Group IV
Status	pelvic girdle syndrome	symphysiolysis	one-sided sacroiliac	healthy
Number	18	20	25	22

Table I shows that group I had 18, group II had 20, group III had 25, group IV had 22 subjects.

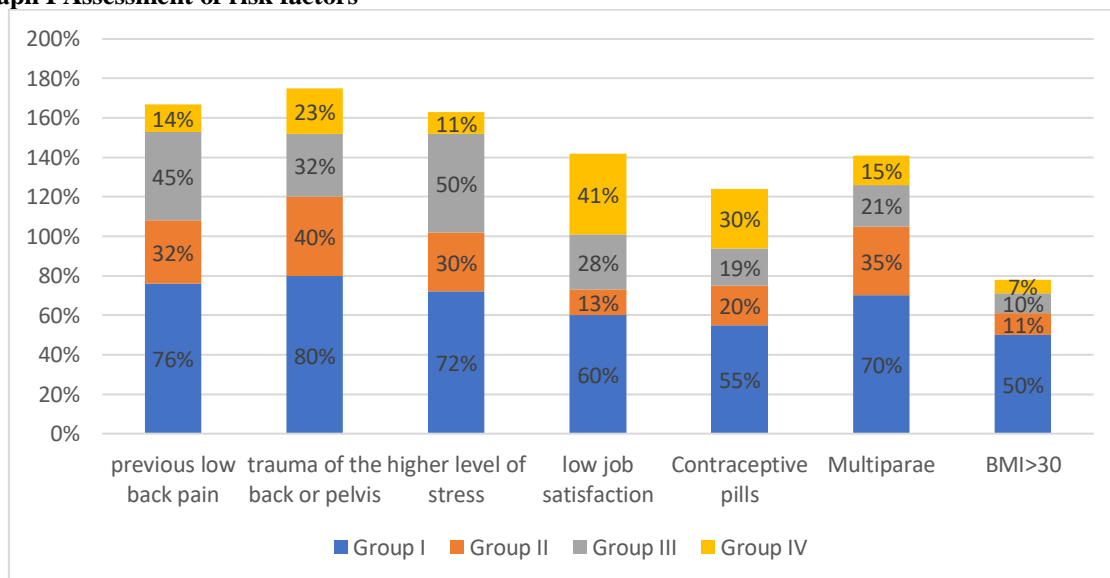
Table II Assessment of risk factors

Risk factors	Group I	Group II	Group III	Group IV	P value
previous low back pain	76%	32%	45%	14%	0.05
trauma of the back or pelvis	80%	40%	32%	23%	0.13
higher level of stress	72%	30%	50%	11%	0.04
low jobsatisfaction	60%	13%	28%	41%	0.02
Contraceptive pills	55%	20%	19%	30%	0.19
Multiparae	70%	35%	21%	15%	0.51
BMI>30	50%	11%	10%	7%	0.05

Table II, graph I shows that in group I, group II, group III and group IV risk factors were previous low back pain seen in 76%, 32%, 45% and 14% respectively. Other factors were trauma of the back or pelvis in 80%, 40%, 32% and 23%, higher level of stress in 72%, 30%, 50% and 11%, low job satisfaction in

60%, 13%, 28%, and 41%. Contraceptive pills in 55%, 20%, 19% and 30%, multiparae in 70%, 35%, 21% and 15% and BMI>30 in 50%, 11%, 10% and 7% women respectively. The difference was significant (P< 0.05).

Graph I Assessment of risk factors



DISCUSSION

Pelvic pain during pregnancy is a common issue experienced by many women. It can be caused by a variety of factors related to the changes occurring in the body during pregnancy.⁷ During pregnancy, the body releases a hormone called relaxin, which helps to loosen the ligaments in the pelvic area to prepare for childbirth.⁸ However, this can also lead to instability in the pelvic joints, causing pain. As the uterus expands during pregnancy, the ligaments supporting it, known as round ligaments, can stretch and cause sharp or stabbing pain in the lower abdomen or groin area.⁹ In some cases, pelvic pain during pregnancy may be a symptom of a urinary tract infection, which is more common during pregnancy due to hormonal changes and increased pressure on

the bladder. Constipation is common during pregnancy and can cause pelvic discomfort and pain due to increased pressure on the pelvic organs.¹⁰

We found that group I had 18, group II had 20, group III had 25, group IV had 22 subjects. Albert et al¹¹ identified possible risk factors for developing four different syndromes of pelvic girdle pain during pregnancy. A total of 2,269 consecutive pregnant women at week 33 of gestation responded to a structured questionnaire and underwent a thorough physical examination. Multivariate analysis could distinguish the four pelvic pain sub groups from the ‘‘Pelvic healthy’’ group with respect to 13 of 24 variables. The pelvic girdle syndrome group revealed a history of previous low back pain, trauma of the back or pelvis, multiparae, had a relatively higher

weight, a higher level of self-reported stress and of job. At a higher risk of developing symphysiolysis were women who were multiparae, had a relatively higher weight, and were smokers. If a woman had vocational training or a professional education, was stressed, had a poorer experience of previous delivery, had previous low back pain, trauma of back, or previous salpingitis, she had an increased risk of developing one-sided sacroiliac syndrome.

We found that in group I, group II, group III and group IV risk factors were previous low back pain seen in 76%, 32%, 45% and 14% respectively. Other factors were trauma of the back or pelvis in 80%, 40%, 32% and 23%, higher level of stress in 72%, 30%, 50% and 11%, low job satisfaction in 60%, 13%, 28%, and 41%. Contraceptive pills in 55%, 20%, 19% and 30%, multiparae in 70%, 35%, 21% and 15% and BMI>30 in 50%, 11%, 10% and 7% women respectively. Mogren et al¹² investigated prevalence and risk factors for low back pain and pelvic pain (LBPP) during pregnancy. Parametric and nonparametric testing was used to establish differences between groups. The response rate was 83.2% (N = 891). The prevalence of LBPP during pregnancy was 72%. Most cases reported both anterior and posterior pain. Increasing parity, history of hypermobility, and reported periods of amenorrhea were risk factors for LBPP. Women with LBPP had significantly higher pre-pregnancy weight, end-pregnancy weight, and pre-pregnancy and end-pregnancy body mass index. Age at menarche and use of oral contraceptives were not associated with LBPP. Nonrespondents were of the same age and parity as respondents. Endresen et al¹³ in their study the answers to 5,400 questionnaires were collected from Norwegian women shortly after delivery, and the occurrence of PPP and LBP in relation to various characteristics was studied. 21% of primipara had had both PPP and LBP, whereas 51% had had neither. The figures in multipara were 31% and 33%. After stratification by parity the frequency of both types of pain decreased with increasing age. The largest occupational risk factor of PPP and/or LBP was having to twist or bend several times an hour. This may be preventable. Partial regression coefficients for parity, smoking, and weight of newborn were significantly larger with PPP than with LBP.

The limitation of the study is the small sample size.

CONCLUSION

Authors found that risk factors for pregnancy-related pelvic girdle pain was previous low back pain, trauma of the back or pelvis, higher level of stress, low job satisfaction, contraceptive pills and multiparae.

REFERENCES

1. Brynhildsen J, Hansson A, Persson A, Hammar M. Follow-up of patients with low back pain during pregnancy. *Obstet Gynecol.* 1998;91:182-6.
2. Hodges PW, Richardson CA. Inefficient muscular stabilization of the lumbar spine associated with low back pain. A motor control evaluation of transversus abdominis. *Spine.* 1996;21:2640-50.
3. Hodges PW, Richardson CA. Delayed postural contraction of transversus abdominis in low back pain associated with movement of the lower limb. *J Spinal Disord.* 1998;11: 46-56.
4. O'Sullivan PB, Beales DJ, Beetham JA, Cripps J, Graf F, Lin IB, et al. Altered motor control strategies in subjects with sacroiliac joint pain during the active straight-leg-raise test. *Spine.* 2002;27:8.
5. Melzack R, Belanger E. Labour pain: correlations with menstrual pain and acute low-back pain before and during pregnancy. *Pain.* 1989;36:225-9.
6. Mens JMA, Vleeming A, Stoelckart R, Stam HJ, Snijders CJ. Understanding peripartum pelvic pain. Implications of a patient survey. *Spine.* 1996;21:1363-9.
7. Svensson HO, Andersson GBJ, Hagstad A, Janson PO. The relationship of low-back pain to pregnancy and gynecologic factors. *Spine.* 1990;15:371-5.
8. Berg G, Hammar M, Moller-Jensen J, Linden U, Thorblad J. Low back pain during pregnancy. *Obstet Gynecol.* 1998;1: 71/5
9. Ostgaard HC, Andersson GBJ, Schultz AB, Miller JAA. Influence of some biomechanical factors on low-back pain in pregnancy. *Spine.* 1993;18:61-5.
10. Szanto E, Hagenfeldt K. Sacroilitis and salpingitis. *Scand J Rheumatol.* 1979;8:129-35.
11. Albert HB, Godskesen M, Korsholm L, Westergaard JG. Risk factors in developing pregnancy-related pelvic girdle pain. *Acta obstetrica et gynecologica Scandinavica.* 2006 May;85(5):539-44.
12. Heiberg EE. Pelvic pain and low back pain in pregnant woman= an epidemiological study. *Scand J Rheumatol.* 1995;24:135-41.
13. Endresen EH. Pelvic pain and low back pain in pregnant women—an epidemiological study. *Scandinavian Journal of Rheumatology.* 1995 Jan 1;24(3):135-41