CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.3271144

Available online at: http://www.iajps.com *Research Article*

PREGNANCY RELATED PELVIC GIRDLE PAIN AND RISK FACTORS

[1]Dr Sadia Ghaffar, [2]Dr Sayeda Rukhsana Noor, [3]Dr Zaira Ashfaq, [4]Dr Shehla Arif

[1]MBBS.University Medical And Dental College,Faisalabad., [2]MBBS,Punjab Medical College.Faisalabad., [3]MBBS.University Medical And Dental College,Faisalabad., [4]District Specialist,King Abdullah Teaching Hospital,Mansehra.

Article Received: May 2019 **Accepted:** June 2019 **Published:** July 2019

Abstract:

Pelvic girdle pain is defined as pain which is musculoskeletal in origin over the anterior and posterior sides of pelvic region, between the posterior iliac crest and gluteal folds. Some definitions include lumbopelvic region without differentiating pelvic girdle pain from low back pain . A major methodological limitation with these studies is that they have not used the same guidelines to classify women with PPGP. Some studies used self-report measures alone, such as pain location drawings and questionnaires, while others added physical examination to the self-reported measures to confirm a classification of PPGP. Out of 280, 170 female had reported pelvic girdle pain. Previous history of low back pain any trauma or multipare are significant risk factors. Women with BMI > 30 had more pain as compared to health pregnant women. Female who had good educational background reported more pain with less physical activity. Female who were obese before pregnancy were more significant in PPGP. The visual analogue scale used to measure the pain reported that women who have complained more pain, suffered from depression and less satisfaction with work.

Corresponding author:

Sadia Ghaffar,

MBBS.University Medical And Dental College,Faisalabad.

QR code

Please cite this article in press Sadia Ghaffar et al., ***Pregnancy Related Pelvic Girdle Pain And Risk Factors.,*** *Indo Am. J. P. Sci, 2019; 06(07).*

INTRODUCTION:

Pelvic girdle pain is defined as pain which is musculoskeletal in origin over the anterior and posterior sides of pelvic region, between the posterior iliac crest and gluteal folds [1]. Pregnancy related pelvic girdle pain is very common. Women used to report moderate to severe pain in their daily activities such as walking, bending, getting up from chair [2]. They find difficulty in performing housework, care for children and the major cause of sick leave in pregnancy is due to pelvic girdle pain [3]. Women suffering from PGP complained number of co morbidities, difficulty of having negative influence in family relationship and having depression as compared to pregnant women without pain [4][5]. Moreover, there is decreased quality of life compared with women without pain [6]. Literature shows that number of PGP has been increasing more rapidly from last two decades. Studies have reported prevalence rates ranging from as low 7% to as high 84% [7]. A major methodological limitation with these studies is that they have not used the same guidelines to classify women with PPGP. Some studies used self-report measures alone, such as pain location drawings and questionnaires, while others added physical examination to the self-reported measures to confirm a classification of PPGP. [8] [9] [10]. Different classifications have been used to define PPGP [11]. Some definitions include lumbopelvic region without differentiating pelvic girdle pain from low back pain [11]. There has also less studies in favor of factors associated with PPGP. No literature has defined a single causative agent of pain. However, a history of low back pain, previous PPGP and psychological distress has been reported to be strongly linked with PPGP [12]. In contrast, associations for age, parity, exercise levels, work history, job satisfaction and education levels with PPGP have demonstrated conflicting findings. For example, some studies report an association between parity and PPGP, whereas others have not [13] [14]. All factors have not been investigated specifically to identify the actual reason of pain. Clinical knowledge suggests that daily activities such as standing, walking, sitting, may be associated with PPGP. Only one study has reported that there is an association between daily living activity and PPGP. Females who used stairs regularly report more complain [15] [16]. Family history has also linked with PPGP. Recently a study reported that if mother or sister had pain during pregnancy the next female have an increased risk of pain [17]. Whereas. No study has published the exact differentiation between PPGP and low back pain [18]. Women having low back pain in previous pregnancy/ or history of trauma/ or pelvis pain are more prone to develop PGP. Multiparity, increased body mass index, increased work load and emotional distress also linked with pain [19] [20]. Previously, the hormone relaxin was thought to be involved in the etiology of pregnancy-related pelvic girdle pain. Studies reported that increased concentration of serum relaxin was found to be a risk factor. This correlation has not been confirmed.

METHODS AND ANALYSIS:

Study design

Cross-sectional study

Sample size

Total 280 women participated in this study

Inclusion criteria

- Women age over 18 years, between 14 and 38 weeks of gestation were included in this study

Exclusion criteria

- Previous history of back pain
- Eclampsia/pre eclampsia
- Any serious pathology
- Psychiatric impairment
- Systematic disease
- History of trauma/surgery
- History of spinal fracture

Ethical consideration

A written informed consent was provided to the participants. And those who were agree recruited in the study. The purpose of the study well explained before the informed consent. The antenatal care provided to each pregnant woman will not be affected nor influenced by the woman's decision to either participate or not participate in the study.

Statistical analysis

P value was set to 95%. Independent t-test was applied. Fata was analyzed by SPSS version 23. Logistic regression was applied to measure different factors. Categorical variables, such as marital status and education level, was compared across the two groups using $\chi 2$ test or Fisher's Exact test, depending on the cell size, to detect if there is a statistically significant difference between groups of women with and without PPGP. For continuous variables, such as pain intensity score, the student t-test or Mann Whitney U test will be used to detect if there is a statistically significant difference between groups. Multiple logistic regressions were used to find out the association of PPGP and other factors.

RESULTS:

Out of 280, 170 female had reported pelvic girdle pain. Previous history of low back pain any trauma or multipare are significant risk factors. Women with BMI > 30 had more pain as compared to health pregnant women. Female who had good educational background reported more pain with less physical activity. Female who were obese before pregnancy were more significant in PPGP. The visual analogue scale used to measure the pain reported that women who have complained more pain, suffered from depression and less satisfaction with work.

DISCUSSION:

There is a huge difference in pregnancy related low back pain and pregnancy related pelvic girdle pain. Of women with PPP and/or PLBP during pregnancy, around 45% have mild symptoms only; 25% are in very serious pain; and 8% are severely disabled. Of women with PPP and/or PLBP postpartum, around 80% have mild symptoms, and 7% have serious problems. The localisation and the nature of the pain vary. Changes in muscle activity have been observed, as well as an unusual perception of the leg when the patient tries to move it, and changes in motor coordination. Theoretical interpretations of these phenomena remain speculative. Thus, there is an urgent need to analyse the nature and causation of disabilities in PPP.The main factors are probably mechanical, due to the alteration in posture required to carry the increasing mass in the abdomen, and hormonal, through changes in the pelvic ligaments. However, the hormone responsible is unclear. Although relaxin acts on human uterine tissue by regulating the expression of metalloproteinases in the matrix, it does not seem to generate musculoskeletal problems [21]. A longitudinal study of 35 women assessed in the first and third trimesters found no association between changes in relaxin concentrations and either the measured laxity of the wrist joints or the onset of pelvic pain [22]. Furthermore, ultrasonography shows an association between the width of the symphysis pubis and pain at that site, irrespective of serum relaxin concentrations [23]. Pregnancy may compromise the inherent stability of bones and ligaments in both the spine and pelvis, requiring muscular activity to maintain stability of the associated joints. In clinical practice attempts to reduce pain in the lower back and pelvis in pregnant women typically include early education, advice, and exercise prescribed by a physiotherapist. Despite some agreement on definitions of pelvic instability, no pathophysiological subgroups have been identified as a basis for treatment. A practical approach to physiotherapy is to assess individuals and then treat groups of women with similar distribution of pain. symphysis pubis pain includes limiting hip abduction to within the range that does not induce pain, reducing other activities that induce pain, and often suggesting the use of a support belt. By contrast, Röst, a Dutch physiotherapist, advocates on the basis of observational data a much more active approach including exercising to increase the range of hip abduction and overcoming functional limitations [24]. Many pregnant women seeking specialist advice for pelvic girdle pain have already tried paracetamol or codeine and found them ineffective. However, some will appreciate advice that paracetamol and weak opioids are safe in pregnancy although non-steroidal anti-inflammatory drugs should be avoided, Elden and colleagues have now reported a controlled trial of acupuncture and stabilising exercises for women with well defined pelvic girdle pain, in which each control participant was offered advice, a pelvic belt, and muscle strengthening exercises [25]. The authors analysed treatment effects for subgroups with different patterns of pain on a visual analogue scale. After treatment, pelvic pain was reduced significantly in the group who had stabilising exercises compared with controls (median difference 9 points ($P = 0.0312$) for pain in the morning; 13 points ($P = 0.0245$) in the evening), but the reduction in pain was even greater for those who had acupuncture (12 in the morning and 27 in the evening, both $P < 0.001$). Those caring for women with pregnancy related pelvic pain now need to press for increased availability of acupuncture, and researchers need to assess the potential benefits of combining acupuncture with stabilising exercises.

REFERENCE:

1. Kanakaris NK, Roberts CS, Giannoudis PV. Pregnancy-related pelvic girdle pain: an update. BMC Med 2011;9:15.
2. . Elden H, Ladfors L, Olsen MF, et al. Effects of acupuncture and stabilising exercises as adjunct to standard treatment in pregnant women with pelvic girdle pain: randomised single blind controlled trial. BMJ 2005;330:761–4.
3. Malmqvist S, Kjaermann I, Andersen K, et al. The association between pelvic girdle pain and sick leave during pregnancy: a retrospective study of a Norwegian population. BMC Pregnancy Childbirth 2015;15:237
4. Persson M, Winkvist A, Dahlgren L, et al. Struggling with daily life and enduring pain: a qualitative study of the experiences of pregnant women living with pelvic girdle pain. BMC Pregnancy Childbirth 2013;13:111.
5. Van De Pol G, Van Brummen HJ, Bruinse HW, et al. Pregnancyrelated pelvic girdle pain in the

Netherlands. Acta Obstet Gynecol Scand 2007;86:416–22.
6. Olsson C, Nilsson-Wikmar L. Health-related quality of life and physical ability among pregnant women with and without back
7. Albert H, Godskesen M, Westergaard J. Evaluation of clinical tests used in classification procedures in pregnancy-related pelvic joint pain. Eur Spine J 2000;9:161–6.
8. Gutke A, Ostgaard HC, Oberg B. Pelvic girdle pain and lumbar pain in pregnancy: a cohort study of the consequences in terms of health and functioning. Spine 2006;31:E149–155.
9. Kristiansson P, Svärdsudd K, von Schoultz B. Back pain during pregnancy. Spine 1996;21:702–8.
10. Larsen EC, Wilken-Jensen C, Hansen A, et al. Symptom-giving pelvic girdle relaxation in pregnancy. I: prevalence and risk factors. Acta Obstet Gynecol Scand 1999;78:105–10
11. Malmqvist S, Kjaermann I, Andersen K, et al. Prevalence of low back and pelvic pain during pregnancy in a Norwegian population. J Manipulative Physiol Ther 2012;35:272–8.
12. Mousavi SJ, Parnianpour M, Vleeming A. Pregnancy related pelvic girdle pain and low back pain in an Iranian population. Spine 2007;32:E100–104.
13. Ostgaard HC, Andersson GB, Karlsson K. Prevalence of back pain in pregnancy. Spine 1991;16:549–52.
14. Pierce H, Homer CS, Dahlen HG, et al. Pregnancy-related lumbopelvic pain: listening to Australian women. Nurs Res Pract 2012;2012:1–10.
15. Ramachandra P, Maiya AG, Kumar P, et al. Prevalence of musculoskeletal dysfunctions among Indian pregnant women. J Pregnancy 2015;2015:1–4.
16. Robinson HS, Veierød MB, Mengshoel AM, et al. Pelvic girdle pain: associations between risk factors in early pregnancy and disability or pain intensity in late pregnancy: a prospective cohort study. BMC Musculoskelet Disord 2010;11:91.
17. Wu WH, Meijer OG, Uegaki K, et al. Pregnancy-related pelvic girdle pain (PPP), I: terminology, clinical presentation, and prevalence. Eur Spine J 2004;13:575–89.
18. Kanakaris NK, Roberts CS, Giannoudis PV. Pregnancy-related pelvic girdle pain: An update. BMC Med 2011;9:15. doi: 10.1186/1741-7015-9-1
19. Ceprnja D, Chipchase L, Gupta A. Prevalence of pregnancy-related pelvic girdle pain and associated factors in Australia: A cross-sectional study protocol. BMJ Open 2017;7(11):e018334. doi: 10.1136/bmjopen-2017-018334.
20. Wu WH, Meijer OG, Bruijn SM, et al. Gait in pregnancy-related pelvic girdle pain: Amplitudes, timing, and coordination of horizontal trunk rotations. Eur Spine J 2008;17(9):1160–69. doi: 10.1007/s00586-008-0703-0
21. Palejwala S, Stein DE, Weiss G, Monia BP, Tortoriello D, Goldsmith LT. Relaxin positively regulates matrix metalloproteinase expression in human lower uterine segment fibroblasts using a tyrosine kinase signaling pathway. Endocrinology 2001;142:3405-13
22. Palejwala S, Stein DE, Weiss G, Monia BP, Tortoriello D, Goldsmith LT. Relaxin positively regulates matrix metalloproteinase expression in human lower uterine segment fibroblasts using a tyrosine kinase signaling pathway. Endocrinology 2001;142:3405-13
23. Marnach ML, Ramin KD, Ramsey PS, Song SW, Stensland JJ, An KN. Characterization of the relationship between joint laxity and maternal hormones in pregnancy. Obstet Gynecol 2003;101:331-5.
24. Röst C. Bekkenpijn tijden en na de Zwangerschap: Een Programma ter Voorkoming van Chronische Bekkeninstabiliteit. Maarssen: Elsevier, De Tijdstroom, 1999
25. Elden H, Ladfors L, Olsen MF, Ostgaard HC, Hagberg H. Effects of acupuncture and stabilising exercises as adjunct to standard treatment in pregnant women with pelvic girdle pain: randomised single blind controlled trial. BMJ 2005;330:761.