

# Prevalence of Pelvic Girdle Pain in Post Partum Women

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## Abstract

**Background:** Pelvic girdle pain is frequently reported musculoskeletal disorder in pregnant women. The condition is complex and underlying mechanism is unclear. Onset of pain is usually at 14-30 weeks of gestation.

Pregnancy hormones soften and stretch the ligaments of the body allowing the pelvis to open slightly during labour thus allowing easier passage. This leads to less stable pelvis. Women experiences reduced capacity for activities such as standing, walking and sitting. PGP results in greater disability in pregnant women. Pelvic instability and pain due to increased lumbar, thoracic and pelvic mobility due to secretion of relaxin hormone lead to increased ligament laxity and there is slightly larger range of movement in the pelvic joint. [3]

PGP is diagnosed on the basis of site of pain and ability to the pain by using the pain provocation tests. PGP is managed conservatively by a multidirectional team. It include addressing the psychosocial implication for the women and family. Approach should be implemented for activity modification, pelvic support garments, manage acute exacerbations, physiotherapy and exercise program to prevent progression of symptoms.

**Objective:** To find out the prevalence of pelvic girdle pain in post partum women.

**Method:** An observational study was carried out using a cross sectional study design. The study was conducted in the city of Karad, Maharashtra. Study was conducted using a sample size of 64 post partum women for a period of 6 months. The inclusion criteria was 20-40 years of females were included who were had FTND. Exclusion criteria was obese females, pre pregnancy low back pain, women with high risk of pregnancy and any kind of trauma to pelvic during pregnancy.

**Results:** The results showed that 60.93% women have pelvic girdle pain during their post partum period by using FABER, P4 test and pelvic girdle questionnaire (PGQ).

**Conclusion:** On the basis of the result of the study, it was concluded that there is significant pelvic girdle pain in post partum period.

**Keywords:** Pelvic girdle, post partum period, FABER test, P4 test, Pelvic Girdle Questionnaire (PGQ).

## Introduction

Pelvic girdle pain is frequently reported musculoskeletal disorder in pregnant women. It is

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universal problem affecting approximately 50% of all pregnant women. The condition is complex and underlying mechanism is unclear. Pain is not limited to a particular trimester during pregnancy but it is often experienced throughout pregnancy and the postpartum period. Onset is usually at 14-30 weeks of gestation. Pregnancy hormones soften and stretch the ligaments of the body allowing the pelvis to open slightly during labour thus allowing easier passage. This leads to less stable pelvis. Some women appear to be capable to

handle the increased range of movement by improving muscle function but the other women cannot.<sup>[1]</sup>

Pelvic girdle pain (PGP) is defined as pain between the posterior iliac crest and the gluteal fold, particularly vicinity of the sacroiliac (SI) joint, which may radiate to the thighs and hips. Pelvic girdle pain can occur with or without pain in pubic symphysis.

PGP disorder comprise a distinct subgroup with a unique clinical presentation and need for specific management. Women experiences reduced capacity for activities such as standing, walking and sitting. PGP results in greater disability specially in the pregnant women. It will lead to poorer quality of life as result of being unable to carry out normal roles and predisposes to chronic pain syndrome.

There are multiple factors are responsible for development of PGP. It is related to hormonal, biomechanical, traumatic, metabolic, degenerative factors and genetic factors.<sup>[2]</sup> For developing PGP biomechanical pathophysiology is shifting of maternal centre of gravity towards anteriorly that transfers the forces onto lumbar spine and the enlarging uterus causes stress in the lower back and pelvic girdle. Anterior shift is associated with pubic symphysis pain and that indicates the women is having pelvic girdle pain. There are compensatory postural changes occurring in the pregnant women and that are increased lumbar lordosis, rounded shoulders, gait changes.

There will be pelvic instability and pain due to increased lumbar, thoracic and pelvic mobility due to secretion of relaxin hormone lead to increased ligament laxity and there is slightly larger range of movement in the pelvic joint.<sup>[3]</sup> It is not compensated by altered neuro-motor control, therefore pain may occur lead to widening and separation of the symphysis pubis.

Women with pelvic girdle pain experiences stabbing, shooting, burning type of deep unilateral or bilateral pain in gluteal region between the iliac crest and gluteal fold that may radiate to posterior thigh. Pain while turning in the bed is may be sign of having pelvic girdle pain. PGP is reported when there are increase in weight bearing activities, walking, standing up from chair and climbing stairs. Another commonly seen are poorer quality of life, work dissatisfaction and stress<sup>[4]</sup>.

Women with previous pelvic or lower back pain, trauma to the pelvis, multiparity, increase in body mass index, physically demanding work, emotional distress, addiction of smoking and drinking while pregnancy, age factor, hormonal contraceptive use increases the woman's risk for developing the pelvic girdle pain.<sup>[5]</sup>

PGP is diagnosed on the basis of site of pain and ability to the pain by using the pain provocation tests. PGP is managed conservatively by a multidirectional team. It include addressing the psychosocial implication for the women and family. Approach should be implemented for activity modification, pelvic support garments, manage acute exacerbations, physiotherapy and exercise program to prevent progression of symptoms.

## Methodology

An observational study was carried out using a cross sectional study design. The study was conducted in the city of Karad, Maharashtra. The samples were chosen using the simple random sampling method. Study was conducted using a sample size of 64 post partum women for a period of 6 months. The inclusion criteria was 20-40 years of females were included who were had FTND. Exclusion criteria was obese females, pre pregnancy low back pain, women with high risk of pregnancy and any kind of trauma to pelvic during pregnancy.

### Procedure:

The study was conducted in Krishna hospital, Karad. Subjects of this study were selected according to inclusion and exclusion criteria and written consent was taken. Full term normal delivery women's were included in this study. They were instructed with all the details assessment that they have going to undergo.

The patient were assess for the pelvic girdle pain with the help of FABER and P4 test. To perform FABER test patient is in supine with hip flexed. Patients leg is then externally rotated and abducted, with the ipsilateral heel resting on the opposite knee. The test is positive if there is the pain in the ipsilateral joints of the pelvis.

In the P4 test patient lies in the supine position and hip is flexed to 90°. Downward pressure is applied to the knee along the axis of the femur. The test is positive if pain is elicited in the gluteal region.

After the confirmation of pelvic girdle pain they ask to fill up the pelvic girdle questionnaire. Total score of pelvic girdle questionnaire was calculated.

### Findings

**Table no.1** PGQ score

PGQ score	Frequency	%
≤50	25	39.06%
≥51	39	60.94%

This table shows that percentage of PGQ score below 50 is 39.06% and above 51 is 60.94% respectively.

**Table no. 2** PGQ Score in age group 20 -≤30

	Mean±SD	T value	P value	Interference
Age (20-≤30)	26.70± 2.57	60.44	<0.0001	Extremely significant
PGQ Score	48.85±16.33	17.44	<0.0001	Extremely significant

This table shows the age group wise PGQ score. The age group is 20-≤30 with mean±SD 26.70± 2.57 and PGQ score mean SD is 48.85 ±16.33

**Table no.3** PGQ Score in age group 31-≤ 40

	Mean±SD	T value	P value	Interference
Age (31-≤40)	33.83±2.119	87.46	<0.0001	Extremely significant
PGQ Score	55.26±12.42	24.37	<0.0001	Extremely significant

This table shows the age group wise PGQ score. The age group is 31-≤40 with mean±SD is 33.83±2.119 and PGQ score mean±SD is 55.26±12.42.

**Table no.4** FABER Test findings

	Findings	%
No. of positive findings	39	60.94%
No. of negative findings	25	39.06%

This table is used for positive and negative FABER test findings. Above table shows that there are total 39 subjects have positive FABER test and 25 subjects have negative FABER test .

**Table no.5 P4 Test findings**

	<b>Findings</b>	<b>%</b>
No. of positive findings	39	60.94%
No. of negative findings	25	39.06%

This table is used for positive and negative P4 test findings.

Above table shows that there are total 39 subjects have positive P4 test and 25 subjects have negative P4 test .

### **Discussion**

Pelvic girdle pain is the frequently reported musculoskeletal disorder in pregnant women. Pain is experienced throughout pregnancy and post-partum period. There are multiple factors that will lead to pelvic girdle pain that are hormonal, genetic, biomechanical, traumatic. Due to this factors there will be reduced capacity for activities like walking , standing and sitting, later it result in greater disability if remain unnoticed. It may lead to poorer quality of life as being unable to carry out normal roles in the life. Therefore early detection and treatment of pelvic girdle pain is important factor.

The aim of the study was to find out the prevalence of pelvic girdle pain in post-partum women. The project were done in 6 months of duration with sample size of 64 females with age group of 20-40 years. Subjects were selected as per inclusion and exclusion criteria. The confirmatory diagnosis of pelvic girdle pain was done with the help of FABER test and P4 test.

After confirmation of pelvic girdle pain patient's consent form was taken and then ask to fill the pelvic girdle questionnaire, which includes 25 questions and their total score were calculated.60.34% patients have total score above 51 out of 100.

Table no 1. Shows PGQ score frequency and percentage.  $\leq 50$  score percentage is 39.06 % and  $\geq 51$  score percentage is 60.34 %

Table no 2. Shows PGQ score in age group 20- $\leq$ 30.

Table no 3. Shows PGQ score in age group 31- $\leq$ 40.

Table no 4 &5 shows FABER test and P4 test findings respectively. In that 39 subjects have positive findings and 25 subjects have negative findings.

This study showed that there is significant pelvic girdle pain in the post-partum period of the pregnant women with the help of P4 and FABER tests. Which were causative factors for the pelvic girdle pain. Therefore the findings suggest that therapist should consider the factors that impact on pelvis and around structures in the pregnancy which leads to pelvic girdle pain in post-partum women.

### **Conclusion**

On the basis of the results of the study, it was concluded that there is significant pelvic girdle pain in the post-partum women. After analysing the pelvic girdle questionnaire almost 60.94% of patients have total score above 51 out of 100 and maximum number of positive findings on FABER and P4 test are 39 subjects.

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**Conflict of Interest:** There were no conflicts of interest in my study.

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**Ethical Clearance:** The Institutional ethics committee has hereby given permission to initiate the research project titled, “PREVALENCE OF PELVIC GIRDLE PAIN IN POST-PARTUM WOMEN” .

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