Role of Physical Therapy in Relieving Sacroiliac Joint Pain during Third Trimester of Pregnancy

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Disclaimer:

Views and results expressed in this article are authors own and not an official position of the institution or funder.

Sources:

Study was conducted in Gynecology department and Physical therapy department of Jinnah Hospital, Lahore.

ABSTRACT:

Objective: to relieve sacroiliac joint pain during third trimester of pregnancy in a quasi-experimental study of 39 pregnant women by giving physical therapy treatment like muscle stabilizing exercises, myofascial release and modifying activities of daily living.

Method: 39 pregnant women in Gynecology department of Jinnah Hospital, Lahore who fulfilled the criteria were included in the study. Pain intensity was rated on (0-10) numeric rating scale NRS.

Results: p>.05. Treatment was not much effective. Women with previous pregnancies were having more pain in sacroiliac joint. Socioeconomic status was a risk factor in pain. Women with low socioeconomic status were more diagnosed with sacroiliac joint pain than middle socioeconomic status.

Conclusion: Physical therapy treatment given for pregnancy related sacroiliac joint pain was not effective**.** May be because of not following treatment plan due to illiteracy.In order to obtain more knowledge about pregnancy related pelvic girdle pain and its treatment, it is necessary to perform a comprehensive study in which all features of the patients can be studied.

Keywords: Pelvic Girdle Pain, Pregnancy, Physical Therapy Exercises

INTRODUCTION:

Physical therapy or physiotherapy is a health care profession mainly concerned with the rectification of impairments and disabilities and the promotion of mobility, functional ability, quality of life and movement potential through examination, evaluation, diagnosis and physical intervention. Physiotherapists work with patients help them to overcome movement disorders that may be congenital, acquired or may be due to some life changing events.

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During pregnancy woman faces a lot of changes related to muscles, ligaments and joints that affects the whole body. Physiotherapist can help in managing these changes by giving expert care and advice during pregnancy, child birth and beyond.

Pregnancy results in usual but gradual weight gain and major postural changes especially during third trimester which causes altered center of gravity, lumbar lordosis, altered spinal curves, pain in low back and pelvis that includes pain in sacroiliac joint and symphisis pubis. Effects of hormonal influences results from 6 weeks gestation and can result in joint and ligament laxity that is normal in most pregnant women but in some can result in joint dysfunction and pain. Many female hormones are released that allow the connective tissues in the body to relax, this relaxation is necessary so that during delivery, the female pelvis can stretch enough to allow birth.

One hormone, relaxin, is believed to be cause and increase extensibility of all ligaments noted especially in pelvic girdle that may cause sacroiliac joint dysfunction. Relaxin in pregnancy is secreted by the corpus luteum, the placenta, and part of the decidual lining of the uterus. Relaxin levels are found to be more than 10-fold higher than nonpregnant levels. Moreover, altered walking pattern associated with pregnancy can cause significant mechanical strain on the sacroiliac joints, which may result in SIJ inflammation, giving a deep ache in the posterior pelvis.(1)

Sacroiliac joint pain is experienced between the posterior iliac crests & gluteal folds, particularly in the vicinity of the sacroiliac joint.

All joints in pregnancy are vulnerable to injury due to decreased protection by ligaments. So, all pregnant women should be aware of the fact that this increased joint laxity and alteration in body weight will alter body mechanics. Incorrect techniques while lifting, poor posture and incorrect positioning will all tend to increase discomfort.

Pregnant women with sacroiliac joint pain may feel dull unilateral low back pain below L5, pain between the posterior iliac crests & gluteal folds, particularly in the vicinity of the sacroiliac joint, mild to moderate ache around the dimple or posterior superior iliac spine region, pain may become worse and sharp while doing activities such as standing up from a seated position or lifting the knee towards the chest during stair climbing, , resting on one leg, getting in and out of a low chair, rolling over and twisting in bed and lifting, pain is typically on one side, but the pain can occasionally be bilateral, referred pain from sacroiliac joint down to the buttocks, groin and back of thigh. And pain improves when lying down.

The first-line treatment of pregnancy-related sacroiliac joint dysfunction is physiotherapy & exercises that focuses on core stability of the trunk and pelvic girdle. That includes motor training of transverse abdominus and multifidus muscles. Relaxation and breathing techniques and Myofascial release or massage to relax muscles that are tighten due to pain. Postural reeducation to minimize shift in center of gravity. Modification of activities is also required like heavy weight lifting, bending, twisting, high velocity ballistic movements, unilateral weight bearing activities, stair climbing are avoided. Keep knees together when getting in and out of bed and the car.(2-4)

MATERIALS AND METHODS:

Quasi experimental study was conducted. Non probability purposive sampling technique was used. The study was conducted at the Gynecology department of Jinnah Hospital Lahore.

39 Women who were included in the study were 25-35 years of age, in third trimester of pregnancy suffering from SI joint pain and did not have any other complications, were given physical therapy treatment for 3 weeks: muscle stabilizing exercises, heating packs, massage and advice for daily life movement.

All those women who had some medical complications or were unwilling to participate or had pain above L5 were not included in the study.

Diagnostic tests to identify sacroiliac joint pain were ASLR active straight leg raising, sacral compression test (side lying), distraction test and self-reported pain.

Oral and written information about treatment plan was given. Pain intensity was rated on 0–10 pain intensity numeric rating scale (NRS)

RESULT:

Ranks

		N	Mean Rank	Sum of Ranks
pa - pb	Negative Ranks	23[a]	15.48	356.00
	Positive Ranks	10[b]	20.50	205.00
	Ties	6[c]		
	Total	39		

a. pa < pb

b. pa > pb

c. pa = pb

Test Statistics [(a)]

	pa - pb
Z	-1.411[b]
Asymp. Sig. (2-tailed)	.158

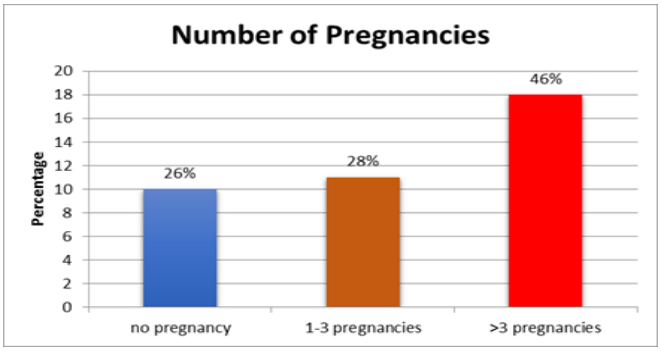
a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Applying Wilcoxon signed rank test in SPSS (v.22) p>.05. Treatment was not much effective.

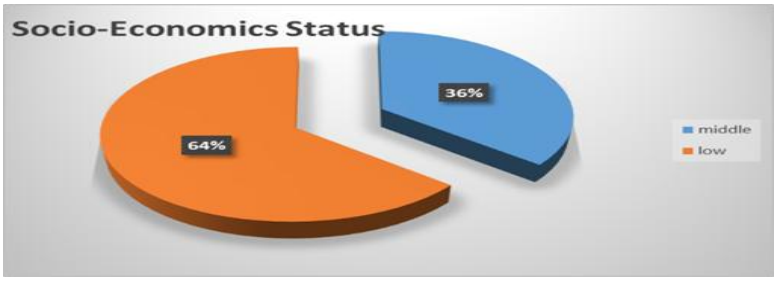
Women with previous pregnancies were having more pain in sacroiliac joint.

		Frequency	Percent
Valid	no pregnancy	10	25.6
	1-3 pregnancies	11	28.2
	>3 pregnancies	18	46.2
	Total	39	100.0



Socioeconomic status was a risk factor in pain. Women with low socioeconomic status were more diagnosed with sacroiliac joint pain than middle socioeconomic status.

		Frequency	Percent
Valid	low	14	35.9
	middle	25	64.1
	Total	39	100.0



CONCLUSION:

- Physical therapy treatment given for pregnancy related sacroiliac joint pain was not effective**.** May be because of not following treatment plan due to illiteracy.
- SIJ pain was more common in women of low socioeconomic status may be because of strenuous work.
- Women with previous pregnancies experienced more pain in sacroiliac joint.
- In order to obtain more knowledge about pregnancy related pelvic girdle pain, it is necessary to perform a comprehensive study in which all features of the patients can be studied.

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