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PREVALENCE OF LOW BACK PAIN AND URINARY INCONTINENCE IN POST PREGNANT WOMEN

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ABSTRACT

BACKGROUND AND PURPOSE: Pain between the costal margins and the inferior gluteal folds which sometime referred down to the leg and accompanied by painful limitation of the movement known as nonspecific low back pain. diagnosing this pain is not related to conditions such as fractures, spondylitis, direct trauma, or neoplastic, infectious, vascular, metabolic, or endocrine–related processes.

Another most common complication during pregnancy or after pregnancy is developing stress urinary incontinence (SUI).it has detrimental effects on the quality of life and SUI is an important social and hygienic health problem affecting adult women.

People who develop SUI develops during pregnancy and after pregnancy without remission 3months after delivery have a very high risk of symptoms persistence 5years later.

so, the objectives of this study are to determine the prevalence of LBP, pain referred down to the leg (LP), PGP, and stress urinary incontinence (SUI) and find the co-relation among them during post pregnancy phase in a large representative sample of pregnant INDIAN women.

METHODS: This is a cross-sectional survey study where all the subjects were interviewed using Oswerty Low back pain questioner after taking their inform consent. Participants were selected conveniently from different areas of Kolkata. Women within age group of 25 to 40 who had a history of Low back pain after their Pregnancy will be included in this study. Pain without any history of Disc herniation was included in this study. History of Injury, Trauma, any other pathological conditions were excluded from this study.

All participants of this study were given university approved informed consent. In addition, Research process will be explained in full. Research will start only after receipt of a signed informed consent.

OUTCOMES MEASURES: Once all the participants were included in the study was assessed using The Questionnaire for The Revised Urinary Incontinence Scale (RUIS). RUIS is a scale which mainly consists of five QUESTION.

RESULTS: In this study among 106 female participants 70 participants (66.03%) showed minimal disability, 21 participants (19.81%) showed moderate disability, 9 participants (8.49%) showed severe disability, 3 participants (2.83%) with bed bound condition due to back pain and disability with 3 participants (2.83%) needs serious medical Intervention. In this study among 106 participants 30 female participants were having mild symptoms (28.30%), 73 participants were having moderate symptoms (68.86%) and 3 participants were having severe symptoms (2.83%) as assessed by RUIS scale.

CONCLUSION: This study concludes that post pregnant women are at higher risk of developing back pain which can vary minimal to moderate severity. Also, there is a mild to moderate risk of developing urinary incontinence among them. It's the high time to find the probable cause for the same and positive interventions needed to prevent further complications. Prevalence of LBP is quite higher among women in comparison with men and post pregnancy the risk factor increases. Urinary incontinence also a predisposing factor after pregnancy and also a health hazards among women in older age groups. So positive interventions needed to solve these issues.

INTRODUCTION

Pain between the costal margins and the inferior gluteal folds which sometime referred down to the leg and accompanied by painful limitation of the movement known as nonspecific low back pain. Diagnosing this pain is not related to conditions such as fractures, spondylitis, direct trauma, or neoplastic, infectious, vascular, metabolic, or endocrine-related processes.

Pain in the symphysis and/or between the posterior iliac crest and the gluteal fold is defined as pelvic girdle pain (PGP), this pain may spread to the posterolateral thigh.

Clinical provocation tests during physical examination are is helpful to distinguish between these two types of pain.

There is a chance of increase the risk of experiencing pain (LBP & PGP) and develop a chronic pain, pathophysiology behind this pain may be changes in the biomechanical, hormonal, and vascular mechanisms. Although these hypotheses and the exact causes remain debatable.

Nevertheless, during pregnancy these two types of pain (LBP&PGP) are more common and most of the women suffer by this.

Low back pain (LBP) and pelvic girdle pain (PGP) related to pregnancy are reported to affect about 50% of pregnant women at

some time during pregnancy.1–4 In most cases, the women recover after pregnancy or within 1 to 3 months postpartum.5–7 However, studies have demonstrated that recovery of LBP and PGP after pregnancy is often incomplete and may persist for years after childbirth.5–9 Furthermore, 10% to 20% of women with chronic LBP have claimed that the initial appearance was in connection with a pregnancy.

A number of studies have reported the prevalence rate of LBP during the 9 months of pregnancy to be over 50%. The incidence of LBP with an onset during pregnancy has been reported to be 61%. It's been reported that among women with LBP of pregnancy, 75% had no history of LBP before pregnancy. In one third of pregnant women, back pain is a severe problem compromising normal everyday life. Mogren in a study investigating perceived health sick leave and psychological situation among Swedish women experiencing LBP during pregnancy reported that 68% of women had been on sick leave and 22% had received maternity allowance. Although LBP in pregnancy is the most common complication

According to a Cochrane review, more than two-thirds of pregnant women experience LBP and approximately one-fifth experience PGP. The prevalence of pregnancy-related LBP and PGP varies between 3.90% and 89.88%

Factors such as history of LBP before pregnancy, history of LBP or PGP during or after previous pregnancy, smoking habits, mother's height, weight, and age, number of previous pregnancies, and use of epidural anaesthesia or caesarean during previous pregnancy may have led to inconsistent result.

Most of the studies on LBP and PGP related to pregnancy have been conducted in Northern European and Anglo-Saxon countries, although prevalence in other countries remains largely unknown

Another most common complication during pregnancy or after pregnancy is developing stress urinary incontinence (SUI).it has detrimental effects on the quality of life and SUI is an important social and hygienic health problem affecting adult women.

People who develop SUI develops during pregnancy and after pregnancy without remission 3months after delivery have a very high risk of symptoms persistence 5years later.

so, the objectives of this study is to determine the prevalence of LBP, pain referred down to the leg (LP), PGP, and stress urinary incontinence (SUI) and find the co-relation among them during post pregnancy phase in a large representative sample of pregnant INDIAN women.

Lumbar back pain (LBP) and Pelvic girdle pain (PGP) Present during and after pregnancy

In this period pain in the lumbar back or in weight-bearing position in the posterior pelvis or deep in one/both gluteal areas may develop, Reduced motion in lumbar back also may seen. Pain present on palpation of back muscles. Little problem develops in gluteal area during walking or standing or Constant pain in that region and sometimes it radiates to the leg region. Provocation test will be negative for pelvic pain and Positive in case of pelvic girdle pain.

METHODOLOGY

STUDY DESIGN

Cross sectional study

STUDY SUBJECTS

Post Pregnant Adult Women

STUDY DURATION

6 months

Participant preparation:

Participants were selected conveniently from different areas of Kolkata. Women within age group of 25 to 40 who had a history of Low back pain after their Pregnancy will be included in this study. Pain without any history of Disc herniation was included in this study. History of Injury, Trauma, any other pathological conditions were excluded from this study.

OUTCOMES MEASURES

Oswestry Low Back Pain Disability Questionnaire:

The Oswestry Disability Index (also known as the Oswestry Low Back Pain Disability Questionnaire) is an extremely important tool that researchers and disability evaluators use to measure a patient's permanent functional disability. The test is considered the 'gold standard' of low back functional outcome tools

For each section the total possible score is 5: if the first statement is marked the section score = 0; if the last statement is marked, it = 5. If all 10 sections are completed the score is calculated as follows: Example: 16 (total scored) 50 (total possible score) x 100 = 32% If one section is missed or not applicable the score is calculated: 16 (total scored) 45 (total possible score) x 100 = 35.5% Minimum detectable change (90% confidence): 10% points (change of less than this may be attributable to error in the measurement) **Interpretation of scores** 0% to 20%: minimal disability: The patient can cope with most living activities. Usually, no treatment is indicated apart from advice on lifting sitting and exercise. 21%-40%: moderate disability: The patient experiences more pain and difficulty with sitting, lifting and standing. Travel and social life are more difficult and they may be disabled from work. Personal care, sexual activity and sleeping are not grossly affected and the patient can usually be managed by conservative means. 41%-60%: severe disability: Pain remains the main problem in this group but activities of daily living are affected. These patients require a detailed investigation. 61%-80%: crippled: Back pain impinges on all aspects of the patient's life. Positive intervention is required. 81%-100%: These patients are either bed-bound or exaggerating their symptoms.

The Revised Urinary Incontinence Scale (RUIS):

The RUIS is a short, reliable and valid five item scale that can be used to assess urinary incontinence and to monitor patient outcomes following treatment. It was originally developed by selecting the best performing urinary incontinence items (selected from standardized measures such as the Urogenital Distress Inventory 6 and the Incontinence Severity Index) which were included in a large community survey of 2,915 Australians in 2006. The RUIS has recently been validated in clinical settings with support from the Australian Government Department of Health and Ageing. These studies have shown that the RUIS is a valid and reliable measure of urinary incontinence. Internal consistency reliability is Cronbach's alpha $\alpha = 0.73$ (urinary incontinence sample, N = 195), alpha = 0.84 (all incontinence patients N = 254) and alpha = 0.91 (community sample N = 2,915). It has high and statistically significant correlations with other measures of urinary incontinence and other clinical indicators of incontinence severity and has better measurement properties than comparable measures (Sansoni et al., 2011). With only 5 items the RUIS is short and simple to use and score. Most patients will only take a minute to complete it.

The average score for patients receiving treatment for urinary incontinence is 10.92 (N = 195). The mean RUIS scores for female urinary incontinence patients was 10.90 and for males it was 11.07. By contrast the average RUIS score in a large community survey was 1.74 (N = 2,915); for females the mean was 2.47 and for males it was 0.70. A score of less than 4 indicates that the patient has no urinary incontinence or very mild incontinence symptoms. Patients with a score of 4 in screening surveys may require further assessment by a continence practitioner. To obtain these scores one would need to endorse 'slightly' or 'rarely' on most incontinence items. Based on the distribution of scores in the clinical sample and comparisons with other clinical indicators, a score of 4-8 is considered mild, a score of 9-12 is considered moderate and a score of 13 or above is considered severe. The cut points are supported by clinician and patient ratings of incontinence severity. The clinician pre-treatment ratings indicated that a RUIS score of 9 or below was considered 'mild', a score of 11 was considered 'moderate' and a score above 12 was classified as severe which provides some clinical confirmation for the suggested cut points. At post-treatment a score of 3 or less was classified as 'normal' by clinicians and patients.

Study Techniques:

Participants were selected conveniently from all areas of Kolkata who is having back pain and UI. The people who have mild to severe back pain along with UI after the pregnancy was included for the study. All participants of this study were given a university approved consent form (Appendix IA). In addition, the research process was explained in full. Research was started only after receipt of a signed consent form from the participants. Data was collected from structured questionnaire which include variables. Participants were free to withdraw their participation without prejudice.

RESULTS AND STASTICAL ANALYSIS:

Table 1. Oswestry Low Back Pain Disability Questioner scoring

	n (Number)	Percentage (%)
Minimal Disability	70	66.03
Moderate Disability	21	19.81
Severe disability	9	8.49
Bed Bound	3	2.83
Positive Intervention needed	3	2.83

Figure 1: Percentage of severity of disability by Oswestry Low back pain questioner

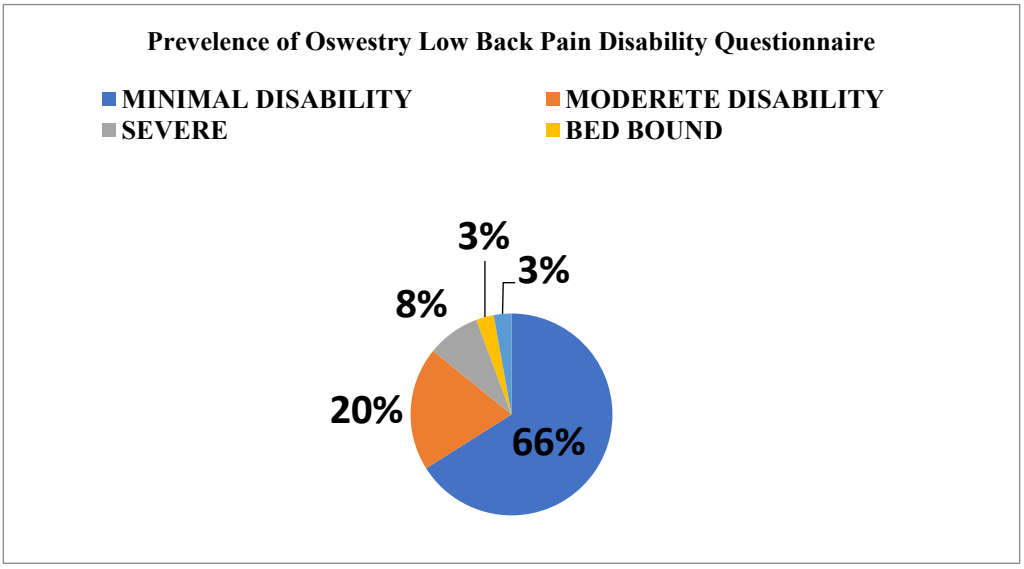
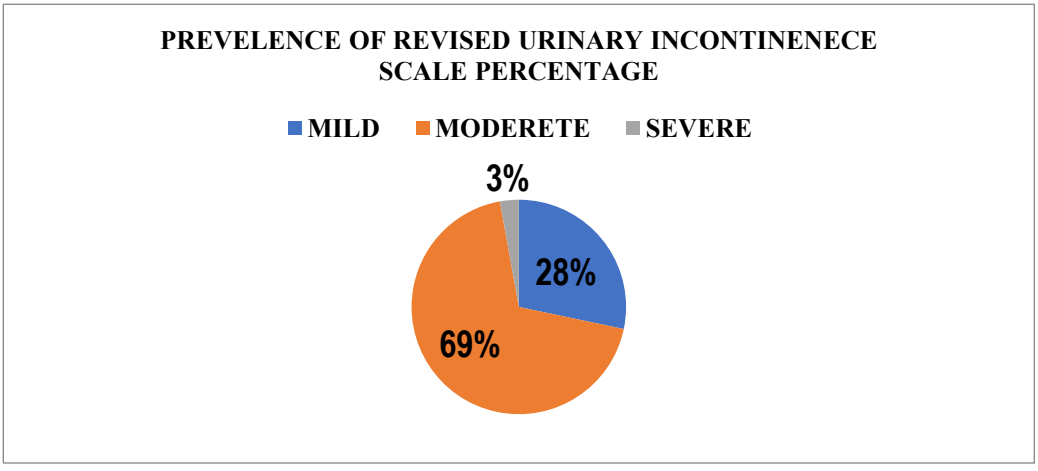


Table 2. Incontinence grading as assessed by RUIS scale

RUIS Grading	N(number)	% (Percentage)
Mild	30	28.30
Moderate	73	68.86
Severe	3	2.83

Figure 2: Percentage of prevalence of urinary incontinence as measured by RUSI scale



INTERPRETATION: In this study among 106 female participants 70 participants (66.03%) showed minimal disability, 21 participants (19.81%) showed moderate disability, 9 participants (8.49%) showed severe disability, 3 participants (2.83%) with bed bound condition due to back pain and disability with 3 participants (2.83%) needs serious medical Intervention. In this study among 106 participants 30 female participants were having mild symptoms (28.30%), 73 participants were having moderate symptoms (68.86%) and 3 participants were having severe symptoms (2.83%) as assessed by RUIS scale.

DISCUSSION

In this cross-sectional survey study where all the subjects were interviewed using Oswerty Low back pain questioner after taking their inform consent.

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Urinary incontinence is a very common condition among post pregnant women. Previously UI defined as ''the complaint of any involuntary leakage of urine' later this definition is replaced the former definition of the international continence society ''involuntary loss of urine, which is objectively demonstrable and a social or hygienic problem'' The most common type is stress urinary incontinence defined as ''the complaint of involuntary leakage on effort or exertion or on sneezing or coughing''

Age, childbirth, lower urinary tract infections, pelvic surgery and factors increasing the intraabdominal pressure (IAP) such as overweight, straining at stool and physical exertion are considered to be risk factors for UI.

pelvic floor or pelvic floor muscle play an important role in UI, previous research shows that activity of the PFM is associated with abdominal muscle activity.

Hence PFM seem to be an integral part of trunk and lumbo pelvic stability in addition to contributing to continence. In healthy people, control of increased IAP is performed automatically as a feed-forward loop via the recruitment of the M Transversus Abdominis (TrA) together with the diaphragm and the PFM and lack of this early muscular recruitment is believed to cause instability in the trunk. Recently, reported symptoms of PF dysfunction and UI in women with post-pregnancy instability and pain in the pelvis. Low back pain (LBP) has been defined as a condition of pain localized to the lumbar spine with or without radiation to the hip or leg, which can be the result of several concurrent conditions whose etiology is unknown.

CONCLUSION

This study concludes that post pregnant women are at higher risk of developing back pain which can vary minimal to moderate severity. Also, there is a mild to moderate risk of developing urinary incontinence among them. It's the high time to find the probable cause for the same and positive interventions needed to prevent further complications. Prevalence of LBP is quite higher among women in comparison with men and post pregnancy the risk factor increases. Urinary incontinence also a predisposing factor after pregnancy and also a health hazards among women in older age groups. So positive interventions needed to solve these issues.

REFERENCES

- Ghaderi, F., Asghari Jafarabadi, M., Mohseni Bandpei, M. Prevalence of Musculoskeletal Pain and Associated Factors with Low Back Pain during Pregnancy. The Iranian Journal of Obstetrics, Gynecology and Infertility. 2013; 15(41): 9-16
- Katonis P, Kampouroglou A, Aggelopoulos A, Kakavelakis K, Lykoudis S, Makrigiannakis A, et al. Pregnancy-related low back pain. Hippokratia. 2011;15(3):205-10. 3. topsoccerblog.com/football-players-injured-tore-achilles
- Bussey MD, Aldabe D, Ribeiro DC, Madill S, Woodley S, Hammer N. Is Pelvic Floor Dysfunction Associated With Development of Transient Low Back Pain During Prolonged Standing? A Protocol. Clin Med Insights Womens Health. 2019;12:1179562X19849603.
- de Abreu DL, Rodrigues PTV, Amaral Corrêa L, Lacombe ADC, Andreotti D, Nogueira LAC. The relationship between urinary incontinence, pelvic floor muscle strength and lower abdominal muscle activation among women with low back pain. European Journal of Physiotherapy. 6. Lionel Pannunzio PT/SCS, Achilles Pain in Soccer Players-Tendinopathy-Part
- 2018;21(1):2-7
- Abrams P, Artibani W, Cardozo L, Dmochowski R, van Kerrebroeck P, Sand P, et al.
- Neurourol Urodyn.2009;28(4):287.
- Ostgaard HC, Andersson G. Postpartum low-back pain. Spine.1992; 17:53-55.
- Eliasson K, Elfving B, Nordgren B, Mattsson E. Urinary incontinence in women with low back pain. Manual therapy. 2008; 13:206-212.
- Kim JS., Kim SY, Oh DW, Choi JD. Correlation between the severity of female urinary incontinence and concomitant morbidities: a multicenter cross-sectional clinical study. Int Neurourol J.2010;14(4):220- 6.