



## PREVALENCE OF URINARY INCONTINENCE AMONG SUBJECTS WITH LOW BACK PAIN

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### ABSTRACT

Low back pain is the pain in lower back area that can be related to problems with the lumbar spine, the disc etc. Urinary incontinence is the complaint of involuntary leakage of urine or immediate proceeded by urgency. The core muscle composed of paraspinal muscle in the back, the abdominal muscle in the front, the diaphragm in the upper abdomen and pelvic floor muscle in the lower abdomen. To investigate the prevalence of urinary incontinence in low back pain subjects. 230 subjects with history of diagnosed low back pain were included in the study. Urinary incontinence was assessed by the Questionnaire for Urinary Incontinence Diagnosis (QUID). There was a prevalence of incontinence among male subjects with back pain (31.9%) and among female subjects with back pain (44.5%), so the assessment of incontinence proves important among low back patients.

**KEY WORDS:** low back pain, urinary incontinence, the questionnaire for urinary incontinence diagnosis(QUID).



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## INTRODUCTION

Urinary incontinence is a common condition in women.<sup>1,2</sup> The prevalence of Urinary Incontinence increases with age, for young adults the prevalence is reported to be 20–30% and around middle age it was reported to be 30–40%.<sup>2,3</sup> The prevalence of Urinary Incontinence has, however, varied with the populations studied and the definitions and methods used. Urinary Incontinence since 2002 was categorized as “the complaint of any involuntary leakage of urine”.<sup>4</sup> This definition has replaced the former definition of the International Continence Society (ICS); “involuntary loss of urine, which is objectively demonstrable and a social or hygienic problem”.<sup>5</sup> The most frequent form of Urinary Incontinence in women is stress urinary incontinence, categorized as “the complaint of involuntary leakage on effort or exertion or on sneezing or coughing”. Urge urinary incontinence is defined as “the complaint of involuntary leakage accompanied by or immediately preceded by urgency”.<sup>4</sup> and has been more frequently reported in elderly women.<sup>1</sup> Age, childbirth, lower urinary tract infections, pelvic surgery and the factors increasing the intra abdominal pressure are overweight, straining while Defecating and physical exertion are traditionally considered to be the major risk factors for Urinary Incontinence, alone or in combination.<sup>1</sup> Sapsford et al, had suggested that there is an inter-relationship between the abdominal wall and the muscles of the pelvic floor<sup>27</sup>. The condition of the pelvic floor and particularly the pelvic floor muscles are considered to be important, although not even single factor completely explains about Urinary Incontinence etiology. Former physiotherapeutic researches suggested that there was an association between the pelvic floor muscles and

abdominal muscle activity. The Pelvic Floor Muscles are necessary for the development of Intra Abdominal Pressure. Recent researches have confirmed that there is a synergistic response between the deep abdominal muscles and the Pelvic floor muscles. Hence, the pelvic floor muscles are seems to be integral part of trunk and lumbo-pelvic stability, in addition to their contribution over to continence. The control of increased intra abdominal pressure is performed automatically by the recruitment of the transversus abdominis, diaphragm and the PFM and lack of these muscles recruitment can cause to instability in the trunk. Recently, Pool-Goudzwaard et al reported symptoms of Pelvic Floor dysfunction and Urinary Incontinence among 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. The association between LBP and UI are observed and discussed here in this study.

## MATERIALS AND METHODS

About 230 Subjects who had diagnosed with low back pain were taken in to the study. This study was conducted for two months in various hospitals in Chennai and Coimbatore. Subjects who are diagnosed with low back pain were included in the study. Subjects who underwent any spinal surgeries were excluded from the study Informed consents were taken from the subjects and then the Questionnaire for Urinary Incontinence Diagnosis (QUID) was given to the subjects and asked them to mark the answer according their problem.

## RESULTS

**Table 1**

***percentage of the male subjects with low back pain who has urinary incontinence according to the questionnaire for urinary incontinence diagnosis.***

Sl. No	QUID	NUMBERS	PERCENTAGE	
1	Cough or Sneeze	None of the time	96	80.7
		Rarely	4	3.4
		Once in a while	8	6.7
		Often	1	0.8
		Most the time	2	1.7
		All the time	0	0
2	Bend Down or Lift Something Up	None of the time	94	79.0
		Rarely	5	4.2
		Once in a while	8	6.7
		Often	1	.8
		Most the time	3	2.5
		All the time	0	0
3	Walk Quickly, Jog or Exercise	None of the time	100	84.0
		Rarely	7	5.9
		Once in a while	1	0.8
		Often	1	0.8
		Most the time	2	1.7
		All the time	0	0
4	Undressing in Order to Use the Toilet	None of the time	94	79.0
		Rarely	13	10.9
		Once in a while	3	2.5
		Often	0	0
		Most the time	1	0.8
		All the time	0	0
5	Strong and Uncomfortable Need to Urinate that you leak Urine (even small drops) or Wet yourself before reaching the toilet	None of the time	92	77.3
		Rarely	13	10.9
		Once in a while	4	3.4
		Often	0	0
		Most the time	2	1.7
		All the time	0	0
6	Rush to the Bathroom because you get a sudden, strong need to Urinate	None of the time	87	73.1
		Rarely	13	10.9
		Once in a while	9	7.6
		Often	0	0
		Most the time	1	.8
		All the time	1	.8

Among Male subjects during cough or sneeze about 3.4% reported urinary symptoms rarely, 6.7 % reported urinary incontinence Once in a while and 0.8% reported urinary symptoms Often, 1.7% reported most of the time .During Bend Down or Lift Something Up about 6.7% reported urinary symptoms once in a while and about 0.8% reported urinary symptoms often and about 2.5% reported most of the time. About 0.8% reported urinary symptoms once in a while or often and about 1.7% reported most of the time when they walk quickly, jog or

exercise. 25% reported urinary symptoms once in a while and about 2.5%reported urinary symptoms most of the time while Undressing in Order to Use the Toilet. About 3.4% once in a while and about 1.7% most of the time reported Strong and Uncomfortable Need to Urinate that they leak Urine (even small drops) or Wet themselves before reaching the toilet. About 0.8% most or all the time rush to the bathroom because they get a sudden, strong need to urinate.

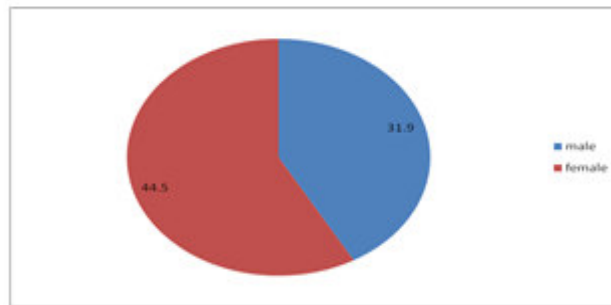
**Table 2**  
**Percentage of the female subjects with low back pain who has urinary symptoms according to the Questionnaire of Urinary Incontinence Diagnosis**

SINO	QUID	NUMBERS	PERCENTAGE	
1	Cough or Sneeze	None of the time	85	71.4
		Rarely	14	11.8
		Once in a while	9	7.6
		Often	1	.8
		Most the time	7	5.9
		All the time	3	2.5
2	Bend Down or Lift something up	None of the time	109	91.6
		Rarely	9	7.6
		Once in a while	1	.8
		Often	0	0
		Most the time	0	0
		All the time	0	0
3	Walk quickly, Jog or exercise	None of the time	111	93.3
		Rarely	7	5.9
		Once in a while	1	.8
		Often	0	0
		Most the time	0	0
		All the time	0	0
4	Undressing in order to use the toilet	None of the time	101	84.9
		Rarely	10	8.4
		Once in a while	5	4.2
		Often	1	.8
		Most the time	1	.8
		All the time	1	.8
5	Strong and uncomfortable need to urinate that you leak urine (even small drops) or wet yourself before reaching the toilet	None of the time	100	84.0
		Rarely	9	7.6
		Once in a while	7	5.9
		Often	1	.8
		Most the time	0	0
		All the time	2	1.7
6	Rush to the bathroom because you get a sudden, strong need to urinate	None of the time	94	79.0
		Rarely	18	15.1
		Once in a while	3	2.5
		Often	1	.8
		Most the time	2	1.7
		All the time	1	.8

Among Female subjects during cough or sneeze about 7.6 % reported urinary incontinence Once in a while and 0.8% reported urinary symptoms Often, 5.9%reported most of the time and 2.5% reported all the time. During Bend Down or Lift Something Up about 0.8% reported urinary symptoms once in a while. About 0.8% reported urinary symptoms once in a while when they walk quickly, jog or exercise.4.2% reported urinary symptoms once in a while and about 0.8%reported

urinary symptoms often, most of the time or all the time while undressing in order to use the toilet. About 5.9% once in a while and about 0.8% often and 1.7% all the time reported Strong and uncomfortable need to urinate that they leak urine (even small drops) or Wet themselves before reaching the toilet. About 2.5% once in a while, 0.8% often,1.7% most of the time and 0.8% all the time rush to the bathroom because they get a sudden, strong need to Urinate most or all the time.

**Graph 1**  
**The prevalence of urinary incontinence in both male and female subjects with low back pain**



About 31.9% of male subjects with Low Back Pain reported to have Urinary Incontinence and about 44.5% of Female subjects with Low Back Pain reported to have Urinary Incontinence.

## DISCUSSION

The results above shows there was prevalence of Urinary Incontinence among patients with Low Back Pain. Although the mechanism for the development of back pain is not well understood, it may be associated with changes in control of the trunk muscles<sup>6</sup> Notably, control of the trunk is dependent on activity of muscles such as the diaphragm<sup>7</sup> transversus abdominis<sup>25</sup> and pelvic floor muscles<sup>9</sup> and reduced postural activity of these muscles has been argued to impair the mechanical support of the spine. A factor that complicates the contribution of these muscles to trunk control is their essential roles in respiration and continence. Michelle Suggested that disorder of respiration and incontinence may be associated with low back pain<sup>10</sup>. It is because there is inter relation between abdominal muscles and pelvic floor muscles so due to weakness of core muscles it may lead to urinary incontinence and at a alarming rate there was a prevalence of incontinence among male subjects with Low Back pain also (31.9%). So the screening for Urinary Incontinence and Pelvic floor muscle should be

included in the assessment of low back pain Also should consider pelvic floor muscle training along with the other core muscles which is very important for both male and female subjects with low back pain Further studies can be done in subjects who exercised and who had not exercised the Pelvic floor muscles in the management of low back pain. The exercises for correction of urinary incontinence can be experimented. Sample size can be increased and can be correlated with body mass index and parity of females subjects.

## CONCLUSION

So this study shows that there is prevalence of urinary incontinence among subjects with low back pain. In that females are more prevalent than males it may be due to parity.

## CONFLICT OF INTEREST

Conflict of interest declared none.

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