

A Survey of Urinary Incontinence in Multigravida Females: A Cross-Sectional Study

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ABSTRACT

Urinary incontinence (UI) is the complaint of involuntary leakage of urine on effort or exertion or, such as sneezing or coughing or in case of urges experienced during infections and is known to be prevalent in females more so in those who are multipara, having an immense impact on the psychosocial health and in turn is associated with a decline in the quality of life. The incidence is adverse due to numerous components which may be hindrance and humiliation experienced while stepping forward and reporting the same, negligence due to insufficient knowledge, shyness, financial vulnerability. Although several large-scale studies have focused on epidemiology of Urinary Incontinence in females of western countries, limited data is available from countries such as India therefore making it the need of the hour to conduct a study here. The objective was to observe the prevalence of Urinary Incontinence and estimate the percentage prevalence of Stress, Urge, Mixed Urinary Incontinence. Hence a cross-sectional study was undertaken wherein 200 multigravida in the age group of 40-60 years were selected based on the inclusion criteria. The International Consultation on Incontinence Questionnaire-UI Short Form (US-2003) was administered to determine their status of urinary incontinence. Results showed the prevalence of urinary incontinence in multigravida to be 45% with stress incontinence being the highest (60.0%). In conclusion, awareness about the symptoms of urinary incontinence and related risk factors will lead to appropriate and timely measures for prevention and treatment hence this study was conducted.

Keywords: Urinary incontinence, multigravida, cross-sectional study, ICIQ UI-SF.

INTRODUCTION

Urinary incontinence (UI) is the complaint of involuntary leakage of urine on effort or exertion, such as sneezing or coughing or laughing^[1]. It has an immense impact on the social and mental health and the quality of life of a person^[2]. Urinary Incontinence is known to be prevalent among females and is associated with decline in quality of life^[3].

A multigravida is one who has previously been pregnant. She may have aborted or have delivered a viable baby^[4].

The pathophysiology of urinary incontinence where there is a rise in the

intravesical pressure that exceeds the maximum urethral pressure^[5]. Risk factors for urinary incontinence apart from multiple pregnancies include obesity, aging, prolonged labor, trauma, chronic constipation, psychosomatic problems, any neurological conditions such as parkinsonism, spinal injuries, cerebrovascular accidents etc^[5].

There are five types of urinary incontinence- Stress, Urge, a Combination of Stress & Urge Incontinence (mixed) Incontinence, Overflow Incontinence and Functional Urinary Incontinence. Stress Urinary

Incontinence (SUI) is defined as involuntary escape of urine from the external urinary meatus due to sudden rise in intra-abdominal pressure ^[5]. Stress may occur during coughing, sneezing, straining while passing urine or stools, carrying heavy objects, bending down or doing heavy exercise ^[2].

Urge Incontinence consists of two components Sensory and Motor Urge Incontinence. Sensory Urge Urinary Incontinence (UUI) is defined as inability to control the escape of urine once there is an urge to void ^[5]. Motor Urge Incontinence also known as overactive bladder is defined as leakage of urine due to detrusor over activity during the filling phase while the patient tries to inhibit it ^[5].

Mixed Urinary Incontinence is defined as the complaint of involuntary leakage associated with urgency and also with exertion, effort, sneezing or coughing. Overflow Incontinence is any involuntary loss of urine associated with overdistension of the bladder ^[6].

Functional Urinary Incontinence is the involuntary leakage of urine resulting from physical or cognitive limitations in reaching or using toilet facilities ^[7]. It occurs when the person's bladder and/or bowel is working normally but they are unable to access the toilet.

Usually female population extensively encounters few incidence of Urinary Incontinence as they progress towards declining age. This is one of the major contributing factors associated with a gradual decline in the quality of life. The incidence is adverse due to numerous components such as: hindrance & humiliation they experience to step forward and report the incidence of urinary incontinence, few females neglect the incidence due to insufficient knowledge, not receiving appropriate counseling and medical guidance, high tolerance threshold, shyness, disinclined to surgical procedures and financial vulnerability.

As the age advances the likelihood of urinary incontinence increases due to

presence of numerous components such as multiple gestations, vaginal delivery, obesity, pelvic surgical procedure, damage to nerves that control the bladder, atrophic vaginitis or urethritis, psychiatric conditions, endocrine disorders (diabetes, hypercalcemia), restricted mobility, Detrusor muscle overactivity/ underactivity, addictions and stool impaction.

Although several large-scale studies have focused on epidemiology of urinary incontinence in females of western countries, limited data is available from Asian countries such as India.

Thus, it was the need of the hour to study Urinary Incontinence in multigravida females of age group 40 to 60 years through a survey.

The aim of this research was to study Urinary Incontinence in multigravida females of age group 40 to 60 years and the objectives were to observe the incidence of Urinary Incontinence and to estimate the percentage incidence of Stress, Urge and Mixed Urinary Incontinence by scoring.

MATERIALS & METHODS

A survey was conducted via online google form after clearance was obtained from the ethics committee of Lokmanya Tilak College of Physiotherapy.

On the basis of the inclusion and exclusion criteria, 200 participants were selected for the survey study. The study included female subjects, Multigravida ^[1], in the of age group 40 - 60 years ^[8], those who could understand English, Hindi or Marathi and those willing to participate and ready to fill consent form.

The study excluded male subjects, Nullipara or primigravida female subjects ^[2 & 9], Females below 40 years and above 60 years, those who had recent surgeries such as any laparoscopic surgeries for Fibroids / Hernia surgeries etc, Females who could not understand English, Hindi or Marathi and those unwilling to participate and fill consent form.

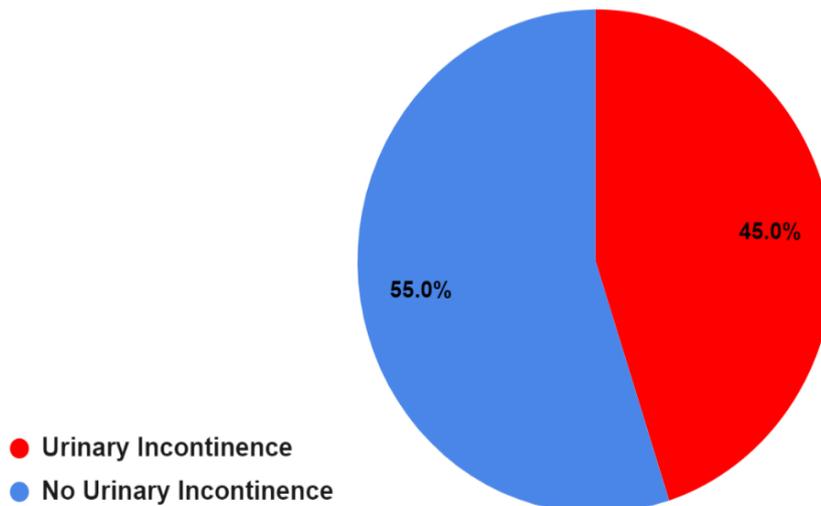
The objectives of the study were explained to the subjects with the help of an

information sheet. Demographics: including information such as name, age, Obstetric History: Parity (Number of Deliveries), Mode of delivery: Normal (Vaginal) or Cesarean, any previous surgeries done were obtained. Consent form was filled by the subjects before data collection. The ICIQ-UI Short Form (US-2003) along with its translations in Hindi and Marathi

were administered to comprehend their status of urinary incontinence. The survey was distributed online via google form in English, Hindi as well as Marathi languages, through WhatsApp, email and other online media. Data collection was completed and statistical analyses was performed.

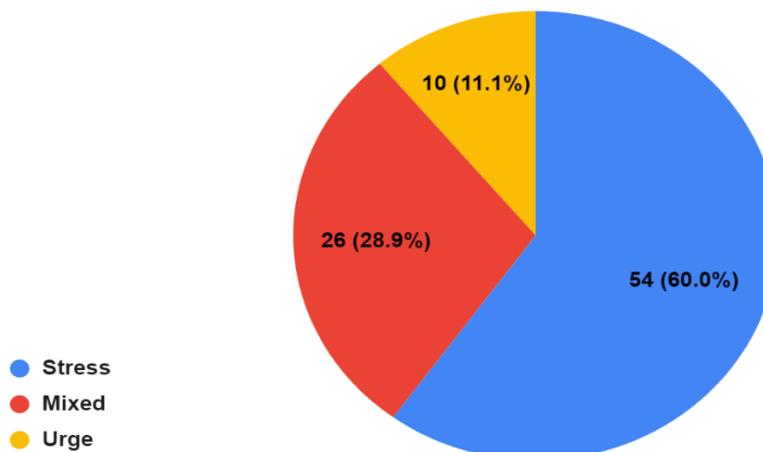
RESULT

Figure 1: Prevalence Of Urinary Incontinence



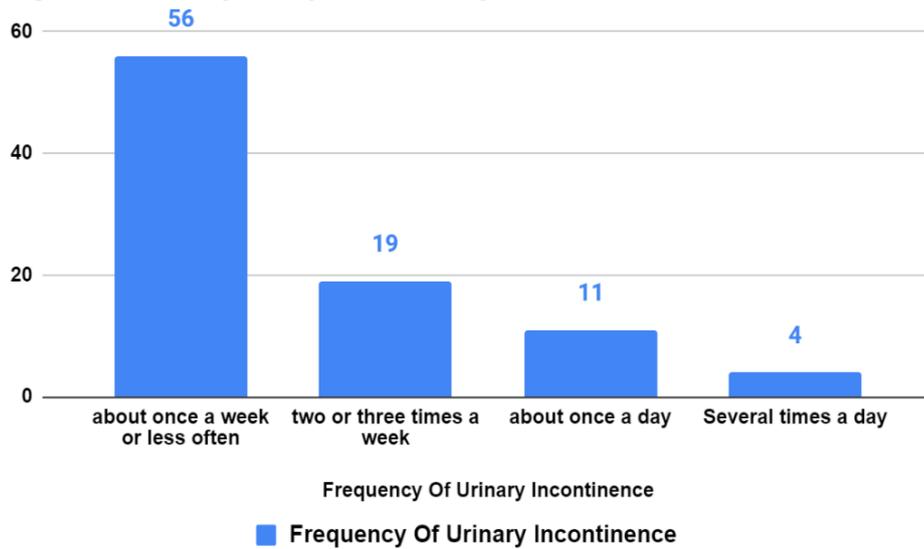
Inference: Out of 200 participants the total percentage prevalence of urinary incontinence was found to be 45%.

Figure 2 : Type Of Urinary Incontinence



Inference: Out of 90 multigravidas having presence of urinary incontinence 60.0% had stress incontinence followed by mixed incontinence 28.9% and lastly urge incontinence 11.1%.

Figure 3 : Frequency Of Urinary Incontinence



Inference: The frequency period of ‘about once a week or less often’ was observed to be overwhelmingly present in about 56 multigravidas. About 19 multigravidas experienced urinary incontinence ‘two or three times a week’, while 11 of them experienced it ‘about once a day’. There were only 4 of the multigravida females who encountered severe, high grade urinary incontinence that was urine leak episodes occurring ‘several times a day’.

DISCUSSION

The aim of the research was to study urinary incontinence in multigravida females in the age group of 40-60 years. It was observed that there was an increase in incidence of urinary incontinence with increasing age. This is due to hormonal changes in the epithelium of the urethral mucosa leading to thinning of urethral mucosa, loss of urethral closure pressure and bladder dysfunction or sphincter dysfunction or a combination of both [2]. As with age there is loss of muscle tone, decreased contractility, changes in the hormonal stimulation and repeated injuries during parturition [14].

Results showed the prevalence of urinary incontinence in multigravida to be 45%. Out of which stress incontinence was the highest (60.0%), followed by mixed incontinence

which was found to be 28.9% and urge incontinence (11.1%).

The results were in agreement with other studies conducted previously on prevalence of urinary incontinence.

Similarly, a study published in The Al Ameen Journal of Medical Sciences 2019 the prevalence of Stress Urinary Incontinence was found out to be the highest (49%) followed by Mixed Urinary Incontinence (28%) and then Urge Urinary Incontinence (22%) in multigravidae [1].

Previous studies conducted showed increased prevalence of urinary incontinence in multigravida as compared to primigravida or nullipara.

Pregnancy related hormonal and mechanical factors such as the constant weight of the gravid uterus on the pelvic floor throughout the pregnancy can expose women especially those with multiple pregnancies to increased risk of stress urinary incontinence, believed to be caused by laxity and damaged fascias, ligaments, peripheral nerves and muscles that function in pelvic organ support and continence control [13].

Stress urinary incontinence where there is urine leakage with an increase in the intra abdominal pressure is the most prevalent among the multigravida population especially those who have undergone vaginal deliveries.

Physiologically post vaginal delivery there is damage to pelvic floor and the pubocervical fascia leading to denervation of the smooth and striated components of the sphincter mechanism. Prolonged labor has been considered to be etiologically responsible for pelvic floor dysfunction involving direct tissue stretching and disruption and neural and muscular damage [2]. Therefore predisposing the females to urinary incontinence.

There is weakness of the pelvic floor muscles. This can be seen in activities like coughing, sneezing, straining while passing stools, during any physical activity or while exercising [2].

Mixed urinary incontinence which demonstrated the second highest prevalence is a type in which there is a combination of both stress and urge symptoms.

Urge urinary incontinence is often seen in chances of urinary tract infections. It was found to be the least prevalent. This is also due to the fact that urge urinary incontinence often occurs in combination with stress incontinence resulting in mixed urinary incontinence.

Additionally, the ICIQ-UI SF also included a question on the amount of urine leakage ranging from a small amount to a large amount. A small amount of urine leakage was observed to be present in about 70 multigravidae.

The International Consultation on Incontinence Questionnaire (ICIQ UI-SF) also incorporated a question on the quality of life where it marked the interference of urinary incontinence in everyday lives on a scale of 1-10. Majority of the multigravida subjects had slight interference in the quality of life depicting less than 5 on the scale, thus interpreting that urinary incontinence did not cause severe interference in the quality of life of the subjects.

Lack of awareness or information about pelvic floor muscle training post delivery is the most common causative risk factor for urinary incontinence.

It is known that urinary incontinence is often trivialized and neglected in terms of acquiring care which was also noted with hesitancy in disclosing symptoms and low response rates during data collection.

Knowledge and awareness about the symptoms of urinary incontinence and related risk factors is important as it will lead to appropriate and timely measures for the identification, prevention and treatment. It will also help in aversion to complications such as prolapse etc.

The study also encountered certain limitations such as the study was conducted in the Vasant Vihar area in Thane city and was limited to the area leading to geographical restrictions.

The study might also have suffered due to an insufficient sample size. Additionally, the various etiologies of urinary incontinence apart from multiple gestations that include obesity, constipation, diuretics etc were not taken into consideration.

CONCLUSION

The results showed the prevalence of stress urinary incontinence in multigravida to be the highest, followed by mixed urinary incontinence and then urge urinary incontinence. There is a need for knowledge and awareness about the symptoms of urinary incontinence, related risk factors, complications, prevention and treatment interventions.

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