

# Screening of Immediate Post Partum Females for Urinary Incontinence

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## ABSTRACT

**Purpose and relevance:** Urinary Incontinence (UI) is highly prevalent and under reported in females. Pregnancy and vaginal delivery has been found to be one of the risk factors for UI. Literature reports high chances of incontinence after 2 to 3 months of delivery. There is lack of study which finds prevalence of UI in immediate post partum (up to 6 weeks post partum) females. So this study aims to screen immediate post partum females for urinary incontinence.

**Participants:** All immediate post partum females reporting to OPD and admitted in ward of Obstetrics and Gynecology Department of V.S. General Hospital, Ahmedabad from February 2016 to May 2016.

**Methodology:** Participants were given a questionnaire developed in Hindi and Gujarati using standard measurement tools for severity and diagnosis of UI. It has 9 closed questions along with general demographic data.

**Analysis:** Total 600 females were enrolled in the study, 82 excluded due to insufficient information. Total 518 females (Mean age: 24.80 years and BMI: 23.19 Kg/m<sup>2</sup>, mean post partum duration 5.17 days) data were analysed using descriptive statistics and Microsoft excel work sheet.

**Results:** 3% subjects had urinary leakage problem out of them 53% had leakage while coughing, sneezing or bending and 46% had while going to bathroom. 85% leaks few drops and 8% leaks few tea spoons.

**Conclusion and clinical relevance:** 3% subjects had urinary leakage problem, which is low as per the literature. It can be due to lack of interest of females in filling questionnaire due to more concentration in other post partum issues. The structural changes may also take some time to develop and so the actual urinary incontinence problem may not be seen immediately.

**Implication:** Early screening can help in early diagnosis and prevention and helps in improving the quality of life of women.

**Key words:** Immediate post partum females, Urinary Incontinence, Screening.

## INTRODUCTION

According to the International Continence Society, <sup>[1]</sup> Urinary Incontinence (UI) is defined as “any complaint of involuntary leakage of urine”. There are three main types of UI; stress urinary incontinence (SUI), urgency urinary incontinence (UUI) and mixed urinary incontinence. <sup>[2]</sup> Among these the most

common is SUI defined as “the complaint of involuntary leakage on effort or exertion, or on sneezing or coughing”. <sup>[1]</sup>

Urinary incontinence is common in women, but is under reported and under treated. Many women suffer in silence, <sup>[3]</sup> believing that it is a normal aging process; however research reported countless situations related to leak of urine.

Pregnancy and vaginal delivery have a significant impact on pelvic floor structures, which may lead to pelvic floor dysfunction due to damage to muscles, ligaments, fascias and peripheral nerves. [4] Pregnancy and parity are main risk factors for developing UI with a prevalence of 7-64 % during pregnancy. [5-7] Mode of delivery also seems to have an impact on UI. Vaginal delivery seems to be associated with an increased risk for lower urinary tract symptoms nine months after birth in primiparous women when compared to women undergone elective caesarean section. [8]

During pregnancy, supporting structures are supposed to be overloaded due to the foetus weight and the progressive growth of the uterus, both in weight and size. [9,10] Additionally, pregnant uterus increases the angle between the bladder neck and urethra, which can participate to urinary symptoms. Hormonal changes due to pregnancy can also cause changes in tissue, in the support and in the continence mechanism. [11,12]

Though very less literature is available on immediate post partum (up to 6 weeks) incontinence prevalence, incontinence problems two to three months post partum has been reported to be 3-38 %. [13,14] According to Pauline et al the estimated prevalence of urinary incontinence after delivery is 7-30% where the post partum duration varies from 3 to 6 months. [15-17]

In a systematic review [18] of population-based studies, in order to investigate the prevalence of UI within the first year postpartum, during the first 3 months postpartum, the pooled prevalence of any postpartum incontinence was 33% in all women. The mean prevalence was double in the vaginal delivery group (31%) compared to the caesarean section group (15%). [18]

Early screening can lead to early diagnosis and early treatment. We can also educate post partum females regarding incontinence chances and prevention. And

so the study aims to screen post partum females for urinary incontinence.

The objectives of the study are:

1. To screen the post partum females with any urinary problems.
2. To screen the post partum females with different types of urinary incontinence problem and to find out the severity of incontinence in them.

## METHODOLOGY

The study has passed through Institutional Review Board of Smt.NHL Municipal Medical College, V.S. General Hospital, Ahmedabad. All the post partum females (up to 6 weeks after delivery) admitted in the hospital or visiting OPD from February 2016 to May 2016 was explained about the study and consent was taken for those who were willing to participate. 600 such subjects were then given the questionnaire in Hindi or Gujarati depending upon their mother language. They were asked to fill in the details and return the questionnaires back to the residents of Obstetric and Gynecology. The subjects who were not literate were made to answer orally and junior resident doctors have filled in the answers. Finishing the questionnaire took only 10 minutes.

The screening questionnaire was developed by the investigators in English, Hindi and Gujarati using Incontinence Severity Index (ISI) [19] and Questionnaire for Urinary Incontinence Diagnosis-6 (QUID), [20] which are standard measurement tools for severity and diagnosis of Urinary incontinence respectively. The QUID [20] is a short, valid and responsive instrument that can serve as a diagnostic tool to determine UI type and also as a measure of stress and urge UI symptom frequency before and after treatment. Sandvik et al in 1993 have validated the ISI scale to measure severity of incontinence in women with urinary incontinence. [21]

The questionnaire used here has 9 closed questions along with general demographic data in the beginning. The

questionnaire has questions to know the type of urinary dysfunction, type of incontinence and severity of incontinence. The last three questions are to know their knowledge regarding exercises in incontinence.

## RESULTS

Total 600 females were enrolled in the study. Out of them 82 were excluded due to insufficient information. Total 518 females (Mean age: 24.80 years and BMI: 23.19 Kg/m<sup>2</sup>, mean post partum duration 5.17 days) data were analysed using descriptive statistics and Microsoft excel work sheet.

The below table shows obstetrical details of subjects.

|                                |           |
|--------------------------------|-----------|
| Total no. of deliveries        | 953       |
| Total no. of normal deliveries | 571 (60%) |
| Total no. of caesarean         | 380 (40%) |
| Range of no. of deliveries     | 1-5       |
| Median of no. of deliveries    | 2         |

The below table shows distribution of subjects according to no. of deliveries.

| No. of deliveries | No. of subjects | Percentage |
|-------------------|-----------------|------------|
| 1                 | 206             | 40         |
| 2                 | 204             | 40         |
| 3                 | 96              | 19         |
| 4                 | 9               | 1.5        |
| 5                 | 3               | 0.5        |

Total 59 (11.38%) subjects gave “yes” answer of question no. 1 which was asking whether they have any urinary problem. The below table shows different urinary problems of subjects according to their response of Q-2.

| Options for answer of Q-2 | No. of subjects (out of 59) | Percentage (out of 59) |
|---------------------------|-----------------------------|------------------------|
| Burning while micturition | 48                          | 81%                    |
| Difficulty in starting    | 4                           | 7%                     |
| Difficulty in stopping    | 2                           | 3%                     |
| Difficulty in controlling | 4                           | 7%                     |
| Any other                 | 0                           | 0%                     |

One subject who gave yes answer of Q-1 did not answer Q-2.

On asking do you have any urinary leakage problem of Q-3, 13 subjects out of 518 gave positive answer. That means 3% subjects had urinary leakage problem. The below table shows distribution of subjects in different situations of urinary leakage.

| Situations               | No. of subjects (out of 13) | Percentage |
|--------------------------|-----------------------------|------------|
| Coughing, sneezing       | 6                           | 46         |
| Bending                  | 2                           | 7          |
| Lifting heavy weight     | 0                           | 0          |
| Walking/running          | 0                           | 0          |
| Going to bathroom        | 6                           | 46         |
| Undressing to use toilet | 0                           | 0          |
| Laughing a lot           | 0                           | 0          |

The below table shows amount of urine leakage of 13 subjects who had leakage problem.

| Amount of urine leak | No. of subjects (out of 13) | Percentage |
|----------------------|-----------------------------|------------|
| Few drops            | 11                          | 85         |
| Few tea spoon        | 1                           | 7.5        |
| Whole urine          | 1                           | 7.5        |

The following information is sought from the answers of last three questions. Total 98% subjects (of total 518 subjects) did not have any urinary leakage problem before delivery. 98% subjects are not aware of exercises for urinary incontinence. 45% subjects are ready to do exercises at home if taught where as 54% subjects are not ready to do exercises at home even if taught. 29% subjects showed willingness to come to physiotherapy department if their doctor advices, whereas 70 % subjects were not willing to come to Physiotherapy department even if their doctor advices.

## DISCUSSION

This study aimed to screen the immediate postpartum (up to 6 weeks from delivery) females of Sheth Chinai Maternity Home, V.S. General Hospital for urinary incontinence so that they all can be educated about and prevented from incontinence as well. Out of 518 females only 13 females had urine leakage problem. Whereas if we see the answer of question 2 which is about what kind of urinary problem they have, 7% of them have ticked on the option of having

difficulty in controlling urine. This means that difficulty in controlling is more prevalent than urinary incontinence and if taken lightly or accepted can lead to incontinence in later stage. These 7% females must be educated well regarding incontinence and should be taught proper exercises to prevent incontinence at an early stage.

Analysis of question 3 gives exact prevalence of urinary incontinence as a symptom. But to confirm the diagnosis, all these 3% females must be examined properly and confirm diagnosis must be done. After that they all need to be managed well. Study result shows that out of these 13 females, 53% had symptoms of stress urinary incontinence as they ticked on the options of leakage of urine while coughing, bending or sneezing. 46% had symptoms of urge urinary incontinence as they ticked on the option of leakage while going to bathroom. This shows high prevalence of SUI and UUI in post partum females.

Glazener et al have found out 29% prevalence of Urinary Incontinence at 3 months post-partum amongst 3405 primiparous. 3% of them had daily or more frequent leakage and 3% needed to wear a pad for this. [22] Farell SA et al have found out 26% prevalence of UI at 6 months post-partum. They have included 690 primiparas with all types of deliveries. [23]

A study aiming to test the effectiveness of a programme for preventing UI in women at 3 months after delivery found 31% to 35% of prevalence of UI at 3 months postpartum. There were 676 women participants who had forceps delivery or high birth weight of baby (>4kg) or both in the study. [24]

In all above mentioned studies, the postpartum duration considered was from 3 to 6 months post delivery. We have taken immediate post-partum females up to 6 weeks post delivery. In a study by Kathryn et al [25] it was found that at 6 weeks postpartum, 11.36% of women reported some degree of urinary incontinence, although the rate of incontinence did not

change significantly over the postpartum year. There were 523 women, aged 14 to 42 years, who had obstetrical deliveries participating in this study.

Here, only 3% immediate post partum subjects had urinary leakage problem which seems to be less in comparison with other literature. It can be due to lack of interest of females in filling questionnaire due to more concentration in other post partum issues. The structural pathology may also take some time to develop and so the actual urinary incontinence problem may not be seen immediately.

One of the reasons which emerge out can also be less number of parity, as 40% subjects had 2 parity and 40% had 1. Literature says that parity has direct impact on UI, and as no. of parity increases the UI prevalence also increases. [7-9] Another reason of having such low prevalence can be a self reported or filled questionnaire which could confound the real incidence of UI.

## CONCLUSION

3% subjects had urinary leakage problem out of them 53% had leakage while coughing, sneezing or bending and 46% had while going to bathroom. 85% leaks few drops and 8% leaks few tea spoons.

### Clinical relevance and added advantages of the study:

Postpartum females are at high risk for developing incontinence, vaginal laxity and prolapse. Apart from these they are also at risk to develop low back pain, obesity and other musculo skeletal problems. This will affect their social and sexual life and thus their quality of life will be compromised.

With this study, we can screen the females for urinary incontinence and can educate them regarding the exercises which can strengthen their perineal floor and thus we can prevent incontinence and prolapse. The females who are screened for incontinence can be asked to undergo further evaluation to diagnose type of incontinence and thus we can start early

conservative treatment and can prevent surgical intervention.

Apart from this, we can also educate them for exercises after pregnancy and can improve their quality of life.

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