

# Frequency of Urinary Symptoms in Pregnancy

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**Aims and objectives:** To assess the frequency of urinary symptoms in pregnant women **Study Design:** Cross-sectional, observational study. The study was conducted at the antenatal clinic, Department of Obstetrics & Gynaecology, Jinnah Hospital, Lahore. **Patients and methods:** Pregnant ladies presenting in the OPD were interviewed for urinary symptoms on a pre-designed proforma. The urinary symptoms for which they were questioned were frequency of micturition, amount voided, urgency, urine leakage and voiding difficulties. Information obtained was recorded and the symptoms were placed in the order of their prevalence. **Results:** Hundred pregnant patients were interviewed. All of them had one or more urinary symptom. The most common problem was frequency of micturition. 72 patients (72%) had complaint of frequency during daytime and nocturia as well. Second common problem was voiding difficulties. 66 patients (66%) had this complaint. Urgency of micturition and urine leakage were the third and fourth frequent complaints. **Conclusion:** Urinary symptoms are universal during pregnancy. Most problems are simple like voiding difficulties. Serious disorders are uncommon but an obstetrician should be on the look out for individual urological problems presenting for the first time in pregnancy.

**Key words:** Urinary Symptoms, Frequency, Pregnancy

Pregnancy induces a variety of anatomical and physiological changes in the urinary tract. Changes in renal function, coexisting pathology, labour and delivery further aggravates these changes. The changes occur in both upper and lower urinary tracts.

Kidneys enlarge in size by > 1cm. Dilatation of renal pelvis causing hydro-ureter occurs, as early as 7 weeks of pregnancy<sup>1</sup>. There is increase in glomerular filtration rate and renal plasma flow. Renal volume is also increases<sup>2</sup>. These changes occur as a result of increase in estrogen, progesterone and dextrorotation of uterus.

In the lower urinary tract bladder and urethral mucosa becomes hyperaemic and congested. Detrusor muscle hypertrophies under the effect of estrogen but bladder becomes hypotonic and its capacity increases due to increase in progesterone<sup>1</sup>. Increase in frequency of voiding and stress incontinence is the commonest symptoms of pregnancy. The gravid patient may also suffer from urinary urgency, urge incontinence, incomplete emptying and slow stream<sup>3,4</sup>.

Frequency and nocturia are the commonest and earliest symptoms to occur in pregnancy. Normal non-pregnant woman voids four to six times during day and rarely at night<sup>5</sup>. The onset of increased frequency may be as early as seven weeks of pregnancy. In early pregnancy frequency is explained by polydipsia and polyuria. In late pregnancy it is attributed to pressure of the uterus on bladder<sup>1</sup>. Increase in sodium excretion and mobilization of dependent edema causes nocturia in pregnancy<sup>6</sup>.

Voiding difficulties also increase in pregnancy. Urinary hesitancy may occur in 27% pregnant patients<sup>7</sup>. Urinary urgency and urge incontinence are increased in pregnancy. The main cause of these symptoms may be due to detrusor instability but to a small extent but mostly due to low compliance<sup>8</sup>.

Stress incontinence in pregnancy is increased. It occurs as a result of myogenic or neurogenic damage to

urethral sphincter following difficult delivery<sup>9</sup>. There is progressive decrease in urethral closure pressure in pregnancy. Hormone relaxin from corpus luteum may induce urethral collagen depolymerisation and softening, which may also contribute to stress incontinence in pregnancy<sup>10</sup>.

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**Study Design:** Cross-sectional, observational study

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## Patients and methods:

Pregnant ladies presenting in the OPD were interviewed for urinary symptoms on a pre-designed proforma. The urinary symptoms for which they were questioned were frequency of micturition, amount voided, urgency, urine leakage and voiding difficulties. Information obtained was recorded and the symptoms were placed in the order of their prevalence.

## Results:

A total of 100 patients were interviewed. All of them had some urinary symptoms. The age range was between 15 to 41 years. There were 27 primagravidas and 73 multigravidas. The frequency of micturition was the most common complaint. 72 patients had increase in frequency. The range was 8-15 times per day, maximum number of patients complained of nocturia (Figure-I). Their number was 79. The time was 1-4 times per day.

Voiding difficulties were present in 66 patients. Hesitancy in 9 patients, 63 patients complained of urgency. Urgency associated with urine loss in 44 patients, while in 19 patients it was not associated with urine loss. Urine leakage was present in 39 patients. 25 had leakage associated with cough and 14 had leakage while lifting heavy weights (Table-I).

Figure-I

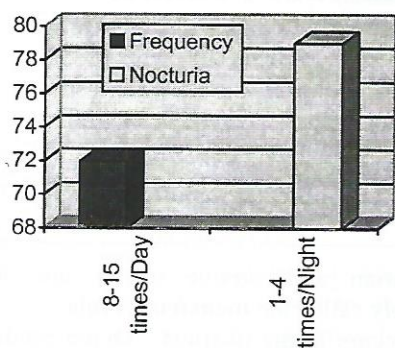


Table-I

Symptoms	n=	%age
Urgency	63	63
Urinary leakage	39	39
With Cough	25	64.10
Lifting heavy weights & Cough	14	35.89

**Discussion:**

Nocturia was the commonest urinary problem in our study. Out of 100 patients 79 had nocturia. The patients had to get up 1-4 times in one night to urinate.

Aslan<sup>11</sup> compared the voiding symptoms in pregnant and non-pregnant subjects. The mean scores for all questions in the pregnant group were significantly higher than controls. The distribution of scores showed that frequency and nocturia were the most prominent urinary symptoms in pregnancy.

Frequency of urination was complained by 72% patients. Francis<sup>5</sup> defined frequency as seven daytime voids and nocturia as one nighttime void and reported increase in frequency of urination in pregnancy. According to the same study increase in frequency occurred in 59% patients in early pregnancy, 61% in mid pregnancy and 81% in late pregnancy.

Saultz<sup>12</sup> reported that frequency was the commonest symptom of pregnancy. Cutner<sup>13</sup> assessed the frequency and nocturia in 47 women undergoing termination of pregnancy at 6-15 weeks. He reported that 40% had increased frequency and 23% had nocturia. Our study showed that 44% patients had urgency and 19% had urge incontinence. Cutner et al<sup>8</sup> reported the prevalence of urgency in 62% and urge incontinence in 18% pregnant patients.

In another study of 549 nulliparas 2.2% reported urgency before pregnancy, 22.9% in pregnancy and 7.8% 12 weeks postpartum. In the same group of women, 0.5%, 8.0% and 2.2% reported urge incontinence before pregnancy, in pregnancy and 12 weeks postpartum respectively<sup>14</sup>.

We studied that 39% patients complained of stress incontinence. Viktrup et al<sup>15</sup> interviewed 305 primipara and found out that 39% had stress incontinence before, during and after pregnancy. Our work was also in

agreement with findings of Caliha<sup>14</sup>. The study by Caliha showed that pregnancy causes a significant increase in symptoms of urinary frequency, incontinence and urgency. According to that stress incontinence was the most common form of incontinence, reported by 35.7% patients.

Hesitancy of micturition occurred in 9% patients. Stanton<sup>12</sup> studied the incidence of urological symptoms in normal pregnancy and found out that hesitancy of urination was decreased in pregnancy. Our results were not in agreement with the study<sup>7</sup>, where 27% had hesitancy in first two trimesters. In another study flow rates in pregnancy were adjusted for volume voided. No difference was found between women complaining of hesitancy or incomplete emptying and pregnant women with normal voiding.

**Conclusion:**

Urinary symptoms are universal during pregnancy. Most problems are simple like voiding difficulties and urgency. Serious disorders are very uncommon but an obstetrician should be on the look out for individual urological problems presenting for the first time in pregnancy.

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