

# Prevalence and severity of restless leg syndrome in pregnant women of Latur district

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## Abstract

**Background:** Restless legs syndrome (RLS), a common sensorimotor disorder, has a wide range of severity from merely annoying to affecting sleep and quality of life severely enough to warrant medical treatment. Previous epidemiological studies, however, have failed to determine the prevalence of those with clinically significant RLS symptoms and to examine the life effects and medical experiences of this group. So further research is needed to find out the prevalence of RLS. **Method:** Cross-sectional study of a sample of 100 pregnant women between age group 20 to 30 years were assessed for the presence of RLS using the Revised International Restless Legs Syndrome Study Group criteria. Subjects were asked to rate the severity of RLS on this scale. Total score was taken. **Result:** A total of 100 subjects were undergone this study and 18 % of people are affected with Restless leg syndrome (n=18). In this 2% of subject are affected with mild RLS, 10% of subjects affected with moderate RLS and 6% of people affected with severe form of Restless leg syndrome. **Conclusion:** RLS is a frequent condition in pregnant women, and is commonly under diagnosed and undertreated. The study concludes that there is a significant prevalence of restless leg syndrome in Pregnancy.

**Key Words:** Restless legs syndrome, Restless legs syndrome rating scale, prevalence, severity.

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## INTRODUCTION

RLS or Willis Ekbom disease is a neurological disorder characterized by an irresistible urge to move once body to stop uncomfortable or odd sensation<sup>1</sup>. The prevalence of RLS in Europe and North America is 5-12%. In Asia the prevalence of RLS is 4 %<sup>2</sup>. The prevalence of RLS in India has been reported to be 2.1% in a small community sample<sup>3</sup>. The prevalence of RLS in general population ranges between 2.5 % - 10 %. Prevalence of RLS during pregnancy is 11% - 27%. Risk in pregnant women is 2-3 times higher than in general population. 30 % of affected women have a recurrence in subsequent pregnancy<sup>4</sup>.

Women affected by pre-existing RLS often complain of worsening symptoms during pregnancy. This is usually a benign form of RLS, with the highest degree of severity in the third trimester and a tendency to disappear around delivery<sup>5</sup>. The last trimester of pregnancy seems to be the most critical, when the highest number of women develop symptoms, and when those with preexisting RLS usually experience exacerbations<sup>6</sup> RLS can be either primary (idiopathic) or arise from secondary cause that leads to iron deficiency (symptomatic forms). Central dopaminergic systems are involved in people with RLS based on the fact that dopaminergic medications improve RLS symptoms. Findings from neuroimaging studies suggest dopamine dysfunction, rather than insufficiency. An autopsy study demonstrated reduced iron stores in the substantia nigra of patients with RLS Thus, one possible cause for RLS might be the inability of the brain to maintain normal iron levels. Iron is also a cofactor in the production of dopamine. Another study demonstrated a possible link between impaired iron homeostasis and dopamine dysfunction<sup>7</sup> The causes of the association between RLS and pregnancy are unknown. The most debated hypotheses are: metabolic alterations, with particular regard to iron and folate deficiency; hormonal

influences related to the increase of prolactin, progesterone and estrogens during late pregnancy; and the changing motor habits and psychological state of pregnant women<sup>8</sup>. Restless legs syndrome (RLS) can occur as a primary disorder, with no apparent cause other than a possible genetic predisposition, or as a secondary condition, most commonly related to iron deficiency, pregnancy, or end-stage renal disease. Pathophysiology of RLS is complex and not yet fully elucidated. Current evidence suggests that three interrelated components may be involved: dopaminergic dysfunction, Impaired iron homeostasis, and genetic predisposition Familiarity with diagnostic criteria and clinical characteristics are essential for diagnosis<sup>9</sup> RLS most commonly affects the legs. It can affect the arms, phantom limbs. RLS sensations are painful, electrical, creeping, itching, pins and needles, pulling, crawling and numbness. Motor restlessness expressed as activity which relieves the urge to move. Movement usually brings immediate relief although temporary and partial Stretching, yoga, or other physical activity may relieve the symptoms. Worsening of symptoms occurs by relaxation. Symptoms worse in the evening and early in the night. Some experience RLS only at bed time while others experience it throughout the day. Most sufferers experience the worst symptoms in the evening and the least in the morning. Most pt with RLS have sleep disturbances because of limb discomfort and periodic limb movements. This will result in daytime sleepiness and fatigue in the severe forms of RLS. Diagnosis of RLS was based on fulfilment of all National Institutes of Health/International Restless Legs Syndrome Study Group (NIH/IRLSSG) essential criteria. Severity of RLS was assessed using the IRLSSG scale

**Need For Study**

RLS is common, distressing sensory motor disorder yet many sufferers are not diagnosed or managed adequately. RLS has detrimental effects on sleep, daily function and quality of life. In western countries 20% of pregnant women populations have this disease. In India there are

limited studies about RLS henceforth it is very significant to find out the prevalence of RLS among pregnant women.

**MATERIALS AND METHODS**

**Materials**

Questionnaire Chart sheet to assess the subject, Consent form – for subject’s signature / thumb print for voluntary participation. Pen used to fill the form. Ink pad used for thumb print of subject

**Methodology**

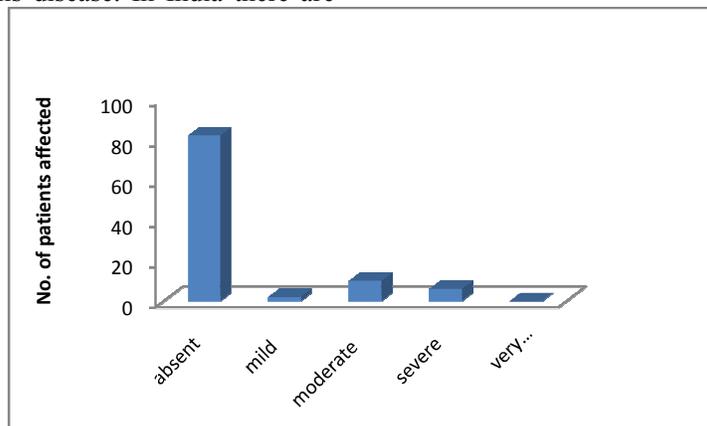
**Procedure**

A 100 pregnant women between age group 20 to 30 years were selected for the study by random sampling method. The subjects are screened with inclusion and exclusion criteria. After permission of ethical committee the study was started. The Inclusion criteria were pregnant women and between age group between - 20 to 30 years. The exclusion criteria were Patients with Peripheral neuropathy, Parkinson’s disease and Unco-operating patients. The subjects were explained in detail information about survey and procedure. The consent of the subjects were taken. The outcome of interest for assessment of severity was RLS Rating Scale This scale has found to be valid and responsive. The Restless legs syndrome Rating Scale was used to evaluate the severity of RLS in pregnant women. Each individual were asked to fill the 10 item RLS rating scale form which were given in local language (Marathi). They have to complete all the questions

**Statistical Analysis**

**Table 1: Prevalence and severity of RLS**

Classification	No. of Patients Affected
Absent	82
Mild	2
Moderate	10
Severe	6
Very severe	0



**Graph 1: Prevalence of RLS in pregnancy**

## RESULT

A total of 100 subjects were undergone this study and 18 % of people are affected with Restless leg syndrome (n=18). In this 2% of subject are affected with mild RLS, 10% of subjects affected with moderate RLS and 6% of people affected with severe form of Restless leg syndrome

## DISCUSSION

Restless legs syndrome (RLS), a common sensorimotor disorder, has a wide range of severity from merely annoying to affecting sleep and quality of life severely enough to warrant medical treatment. Prevalence of RLS during pregnancy is 11% - 27% in United States. Risk in pregnant women is 2-3 times higher than in general population. In India there were very limited studies and awareness about Restless leg syndrome in pregnancy women. Manconi conducted a study on the risk factors of RLS and he stated that pregnant women have at least two or three times higher risk of experiencing RLS than general population. Women affected by pre-existing RLS often complain of worsening symptoms during pregnancy<sup>10</sup>. RLS in pregnant women is frequently unrecognized this is usually benign form of RLS with the highest degree of severity in third trimester and having tendency to disappear around delivery<sup>11</sup>. Nada Djokanovic conducted study on Medications of RLS in pregnancy. She states that pregnant women have two or three times higher risk of experiencing RLS than in general population. RLS can occur as a primary disorder and related to iron deficiency, pregnancy, end stage renal disorders<sup>12</sup>. Berger K conducted study on Sex and the risk of restless legs syndrome in the general population. He stated that the overall prevalence of RLS was 10.6%, increasing with age, and women were twice as often affected as men. While nulliparous women had prevalences similar to those among men up to age 64 years, the risk of RLS increased gradually for women with 1 child, 2 children, and 3 or more children. Subjects with RLS had significantly lower quality-of-life scores than those without the syndrome. Restless legs syndrome is a common disease in the general population, affecting women more often than men. It is associated with reduced quality of life in cross-sectional analysis. Parity is a major factor in explaining the sex difference and may guide further clarification of the etiology of the disease<sup>13</sup>. Mc Parland P conducted study on Restless leg syndrome in pregnancy. He stated that Restless legs syndrome is a common complaint in pregnancy affecting up to one in every three women. The exact pathophysiology is poorly understood. The majority of patients respond to simple explanation and reassurance, however, a small proportion may suffer debilitating symptoms requiring drug

therapy<sup>14</sup>. Manconi M, *et al* conducted a study on the risk factors of RLS and he stated that pregnant women have at least two or three times higher risk of experiencing RLS than general population. Women affected by pre-existing RLS often complain of worsening symptoms during pregnancy. RLS in pregnant women is frequently unrecognized this is usually benign form of RLS with the highest degree of severity in third trimester and having tendency to disappear around delivery<sup>15</sup>. Owing to the moderate prevalence of RLS in pregnancy in the Indian population the awareness about this condition should reach to common people. A total of 100 subjects were undergone this study and 18 % of people are affected with Restless leg syndrome (n=18). In this 2% of subject are affected with mild RLS, 10% of subjects affected with moderate RLS and 6% of people affected with severe form of Restless leg syndrome.

## CONCLUSION

A total of 100 subjects were undergone this study and 18 % of people are affected with Restless leg syndrome (n=18). In this 2% of subject are affected with mild RLS, 10% of subjects affected with moderate RLS and 6% of people affected with severe form of Restless leg syndrome. The statistical analysis suggests that there is significant population are affected with restless leg syndrome. The study concludes that there is a significant prevalence of restless leg syndrome in Pregnancy.

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