

PREVALENCE, CAUSES, DIAGNOSIS AND TREATMENT OF PREGNANCY RELATED RESTLESS LEGS SYNDROME IN PAKISTAN

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Abstract: Objective: The aim of the study was to assess the prevalence, causes diagnosis and pharmacological management of pregnancy related RLS(Restless legs syndrome).

Materials and management: This was an observational cross sectional study. Hundred questionnaires were prepared and administered consisting of both restricted and unrestricted questions .The data collection form contained the content related to evidence, diagnosis and management of pregnancy related RLS. Data was collected by direct interviewing the patients. The collected data was analyzed by descriptive statistics and results were presented in the form of table and graphs.

Results: According to study 59% patients had pregnancy related RLS and in 33% patients these sensations began early in first trimester. In 34% population, the sensations were worst at night and more than half population experienced interference with sleep due to RLS. In 14% patients these sensations were very severe but moderate in 50%.A small number of patients switched to medications and found them effective.63% patients found information provided by pharmacist to be very much effective.

Conclusion: Pregnancy related RLS is a disease with unclear etiology, many contributing factors and good prognosis. Thus, the role of health care professionals and pharmacist is very essential in helping patients by managing their life and educating them on disease in order to lead them to healthier life.

Keywords: Restless legs syndrome, Pharmacological treatment, Pregnancy.

INTRODUCTION:

Restless legs syndrome is a sensorimotor disorder characterized by a strong desire to move the legs with disagreeable sensations, which increases during night and rest periods. Ekborm first defined the connection between pregnancy and RLS in 1945.Its occurrence varies by age, sex and race .It is reported at a rate of 5-15% in the general population. It is reported to develop twice more in females than in males. Its occurrence during pregnancy is found to be

higher than the general population. About 26 percent of pregnant women have restless leg syndrome (RLS), according to a report published in the Journal of Midwifery and Women's Health. Pregnancy related RLS is commonly observed during the third trimester. RLS is often experienced for the first time or the signs and symptoms of patients already diagnosed with RLS become more worse. The prevalence of RLS is often reported to increase with the week of pregnancy. In a study by Facco et al, RLS prevalence was found to be 17.5% in the 13th week of pregnancy versus 31.2% in the 30th week of pregnancy. The average beginning of pregnancy-related RLS is reported to be 3.1 months before delivery. [1, 2]

RLS leads to disagreeable sensations in lower legs. These feelings cause an unstoppable desire to move the legs. Symptoms may include moving slowly and dragging the body, bubbling, exerting force to cause movement, or pulling hardily, Blazing or blistering, Aching, palpitating, or pain, itching or persistently worrying. [3]

Hormonal level (estrogen, Thyroid hormone) and changes connected with iron-folate metabolism are considered the primary causes in subsequent development of pregnancy-related RLS. Family history also plays an important role. Accurate identification is essential. Diagnostic standard of the International Restless Legs Syndrome study group (2014) are suggested to be used for diagnosis. Specially, leg involuntary contractions, positional discomfort, formation of blood clots in the veins, abnormal accumulation of fluids in legs, compression neuropathies, sore leg muscles, and inflamed joints are basic pathologies which should be considered in diagnosis. The diagnosis of RLS is based on patient's symptoms and answers to question, regarding family history of similar symptoms, medication use, presence of other symptoms, or medical conditions or problem with daytime sleep. Immobilisation tests in which patients attempt to maintain a seated position without moving their legs (suggested imobilisation test) are used experimentally as the only objective test to stimulate waking RLS symptoms by forced rest. Another alternate is the forced variant test (FIT)

during which legs are physically inhibited while interior tibial EMGs record PLM. This test is no longer suggested due to patient discomfort. [4,5]

Treatment include non-pharmacological approaches as well as pharmacological approaches. Mentally provoking activities such as puzzles, moderate intensity exercise and massage are suggested as non-pharmacological approaches. Pharmacological therapies are suggested for patients whose symptoms remain even with non-pharmacological approaches. Oral iron is given if the ferritin level is $<75\text{mcg/l}$. It is recommended to check the serum ferritin level of these patients every 6-8 weeks. If oral iron is not fulfilling the requirements, IV iron can be considered in patients with refractory RLS in their second or third trimester whose ferritin level are $<30\text{mg/l}$.

Treatment options other than IV iron should be considered in the first trimester. It is reported that small doses of clonazepam can be given for refractory RLS in the second and third trimester.(0.25-1mg/night).Carbidopa and Levadopa can be given to patients with refractory RLS during pregnancy but the dose must be lower than 50/200mg/day. Low doses of oxycodone can be given to pregnant women with very severe or refractory RLS after the first trimester. [5, 6]

Materials and Methods:

Hundred pre –designed perfomas were filled by hand in direct interaction with patients and professionals in general and gynecological departments of selected hospitals. It was an observational cross sectional study. Sample size of hundred was selected on the basis of random sampling and data was collected with detailed questioning in comfortable environment. Hundred accurately filled questionnaires were evaluated for study. Questionnaires were designed to observe prevalence, causes, diagnosis and pharmacological and non pharmacological treatment approaches. Data was analyzed using various descriptive

statistics and results were shown in the form of various graphs and tables.

Results:

According to study 59% patients had pregnancy related RLS and in 33% patients these sensations began early in first trimester. In 34% population, the sensations were worst at night and more than half population experienced interference with sleep due to RLS. In 14% patients sensations were very severe but moderate in 50%. 57% patients had family history of RLS. 54% had iron deficiency. 3% had diabetes. Small number of patients switched to medications and found them effective. 63% patients found information provided by pharmacist to be very much effective.

Patient demographics	Frequency	percentage
21-30 years	45	45%
31-40 years	51	51%
41-50 years	4	4%
First trimester	63	63%
Second trimester	19	19%
Third trimester	18	18%
Smoking habit	0	0%
Alcohol consumption	0	0%

Caffeine use	0	0%
Married	100	100%
Females	100	00%
Males	0	0%
Family history	57	57%

Results of study:

	Frequency	percentage
Evidence of RLS	59	59%
RLS before pregnancy	14	14%
RLS interference with sleep	29	29%
Iron deficiency	54	54%
Use of anti nausea drugs	22	22%
Onset at first trimester	63	63%
Onset at second trimester	19	19%

Onset at third trimester	18	18%
Use of medications	15	15%
Calcium supplements	8	8%
Iron supplements	10	0%
Multi vitamins	3	3%

Discussion:

Pregnancy related RLS is becoming increasingly common. RLS occurs more frequently in pregnant women. There is a great need for management of pregnancy related RLS.

Patient response:

During surveys in various government and private hospitals of Lahore, different data has been collected and analyzed which shows various aspects of pregnancy related RLS.

A recent study of pregnant women shows that restless legs syndrome (RLS) is common and is strongly associated with poor sleep quality, increased daytime drowsiness, and poor daytime working, which are common problems during pregnancy. Results show that 36 percent of women in their third trimester had RLS, and half of the women with RLS had moderate to severe symptoms. As compared to pregnant women without RLS, those with RLS were more likely to experience poor sleep quality and poor daytime working, and they were also more likely to have more daytime sleepiness. Also, the study found a positive dose-

response relationship between RLS severity and the sleep-wake disturbances. [4]

According to this observational study 33% of women in their early first trimester had RLS and half of the women had moderate to severe symptoms. 29% patients always experienced interference with sleep and poor daytime working. Majority of the patients use life style modifications to treat the disease but still there is a great need to spread awareness and educate people about the disease. Mostly calcium supplements, iron supplements and multivitamins are prescribed.

Health care Professionals' Response:

From the population of health care professional interviewed, most of them agreed that these efforts must be redoubled but a few thought that these efforts are sufficient to fight with the disease. 8% of professionals recommended calcium supplements, 10% prescribed iron supplements. 3% preferred multi vitamins while 87% considered other therapies (pharmacological and non pharmacological)

Conclusion:

It was concluded from the above study that pregnancy usually induces restless legs syndrome. As ratio of pregnancy induced RLS is double in pregnant female than non pregnant females. Most of the people still have no idea how to reduce the symptomatology and pharmacological and non pharmacological approaches. Pharmacological and behavioral managements are still less than required. People are not aware of proper passive management. Counseling is not enough pharmacologically and role of pharmacist is not well recognized.

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