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DERLEME / REVIEW

A Neglected Area: Restless Leg Syndrome in Pregnancy and The Role of the Obstetric and Gynecology Nurse

İhmal Edilen Bir Alan: Gebelikte Huzursuz Bacak Sendromu ve Kadın Sağlığı Hemşiresinin Rolü

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Abstract

Restless legs syndrome is the most common movement disorder in pregnancy and is more common in pregnant women than in healthy women and men. However, it is not well known among obstetricians. Similarly, the awareness of pregnant women about restless legs syndrome is also low. Genetics, the brain's dopamine system and iron metabolism are thought to be effective in the pathophysiology of the disease in pregnancy. The disease usually disappears after delivery, but if not treated, sleep disorders, psychological problems, decreased quality of life, as well as symptoms of pregnancy and birth-related complications such as preeclampsia, the threat of miscarriage, premature birth, difficult birth, cesarean delivery and intrauterine growth retardation may occur. Diagnosis in pregnancy is made using the basic criteria of the International Restless Legs Syndrome Working Group.

Non-pharmacological methods are primarily recommended for treatment. However, if symptoms are severe, more reliable drugs should be considered. In symptom management, it is essential to control anemia, sleep apnoea, and drug use that exacerbate restless legs syndrome. To reduce the severity of restless legs syndrome during pregnancy, non-pharmacological treatments such as moderate exercise, yoga, hot/cold water applications, relaxation exercise, relaxing background music, and sleep hygiene can be recommended. Obstetrics and gynecology nurses, who have a crucial role and responsibility in pregnancy follow-up, should be able to provide effective and quality care to women in the prepartum, peripartum, intrapartum, and postpartum periods with a comprehensive approach in line with evidence-based practices.

Keywords: Pregnancy, restless legs syndrome, obstetrics and gynecology nursing, nursing care.

Öz

Huzursuz bacak sendromu gebelikte en fazla görülen hareket bozukluğu olup gebelerde sağlıklı kadınlara ve erkeklere göre daha sık görülmektedir. Buna karşın doğum uzmanları tarafından yeterince tanınmamaktadır. Benzer şekilde gebelerin de huzursuz bacak sendromuna ilişkin farkındalıkları düşüktür. Hastalığın gebelikteki patofizyolojisinde genetik, beyin dopamin sistemi ve demir metabolizmasının etkili olduğu düşünülmektedir. Semptomlar genellikle doğumdan sonra kaybolmaktadır ancak hastalık tedavi edilmezse uyku bozukluğu, psikolojik sorunlar, yaşam kalitesinde azalmanın yanında preeklampsi, düşük tehdidi, erken doğum, zor doğum, sezeryan doğum ve intrauterin büyüme geriliği gibi gebelik ve doğumla ilgili komplikasyonlar yaşanabilmektedir. Gebelikte tanı, Uluslararası Huzursuz Bacak Sendromu Çalışma Grubu'nun temel kriterleri kullanılarak konulmaktadır.

Tedavide primer olarak non-farmakolojik yöntemler önerilmektedir. Ancak semptomlar şiddetli ise daha güvenilir olan ilaçlar düşünülmelidir. Semptom yönetiminde öncelikle anemi, uyku apnesi, huzursuz bacak sendromunu şiddetlendiren ilaç kullanımı gibi faktörlerin kontrol altına alınması önemlidir. Gebelikte huzursuz bacak sendromu şiddetini azaltmaya yönelik orta derecede egzersiz, yoga, sıcak/soğuk su uygulamaları, progresif gevşeme egzersizi, gevşeme fon müziği dinlenmesi, uyku hijyeni gibi farmakolojik olmayan tedaviler önerilebilmektedir. Gebe takibinde önemli rol ve sorumluluğu olan kadın sağlığı hemşirelerinin kadınlara prepartum, peripartum, intrapartum ve postpartum dönemde bütüncül bir yaklaşımla kanıta dayalı uygulamalar doğrultusunda etkili ve kaliteli bir bakım verebilmesi gerekmektedir.

Anahtar Kelimeler: Gebelik, huzursuz bacak sendromu, kadın hastalıkları ve doğum hemşireliği, hemşirelik bakımı.

1. Introduction

Restless Leg Syndrome (RLS) is a common sensorimotor neurological disorder during pregnancy. The prevalence of the disease, which affects approximately 21.4% of pregnant women, is higher in the third trimester and usually resolves after delivery (1,2). It is characterized by an urge to move the legs, often accompanied by unpleasant sensations, worsening at rest and at night. Restless legs syndrome can adversely affect sleep quality, quality of life, and fetal health. Premature birth, pain, and cesarean delivery are more common in pregnant women with RLS (3). Although there are resources on the pathophysiology, associated risk factors, diagnosis, complications, and treatment of gestational RLS in the literature, no evidence has been found regarding the duties of anobstetrics and gynecology nurse in the care of pregnant women with RLS (1-3).This review aimed to guide nurses in planning care by drawing attention to the characteristics of gestational RLS and the role of the obstetrics and gynecology nurse in the care of pregnant women with RLS.

1.1. Restless legs syndrome pathophysiology in pregnancy

The most important factors that play a role in RLS development during pregnancy are genetics, the brain's dopamine system, and iron metabolism.

Endocrinological factors: Changes inprogesterone, estrogen, and thyroid hormonesare associated with RLS symptoms (4-6).

Metabolic factors: Low levelsof folate, iron, and vitamin D are risk factors for the development of RLS (7-9).

Genetics: Familial predisposition plays a key role in the severity of symptoms and the prevalence of RLS during pregnancy (4,9,10).

Pregnancy: Advanced age and recurrent pregnancies causes RLS to be experienced in subsequent pregnancies (11).

1.2. Diagnosing restless legs syndrome in pregnancy

According to the International Restless Legs Syndrome Working Group (IRLSWG), there are five basic RLS diagnostic criteria for the diagnosis of RLS:

1. Theurge to move the legs is usually, but not always, accompanied by or caused by uncomfortable and unpleasant sensations in the legs.

2. The urge to move the legs and the accompanying unpleasant sensations begin or worsen during of rest periods or inactivity such as lying down or sitting.

3. The urge to move the legs and the accompanying unpleasant sensations are partially or entirely relieved by movements such as walking or stretching, at least if the activity continues.

4. The urge to move the legs during rest or inactivity and the accompanying unpleasant sensations usually occur in the evening or at night or are worse than during the day.

5.The above features are not explained solely by symptoms related to another medical or behavioral condition (e.g., muscle pain, venous stasis, leg edema, arthritis, leg cramps, positional discomfort, habitual foot tapping) (12).

Allfive of the abovecriteria must be present for RLS diagnosis in pregnant women.

1.3. Treatment of restless legs syndrome in pregnancy

The most critical first-line treatment is iron supplementation for iron deficiency. The patient's iron status is determined (early morning, fasting iron panel: serum ferritin, iron, total iron-binding capacity, and percentage transferrin saturation). Serum ferritin is <75 mcg/L, then ferrous sulfate at a dose of 65 mg elemental iron, one to two times daily is recommended.Safe storage of iron is very important hence serum ferritin, and percent iron saturation should be rechecked after 6-8 week. In the presence of the inflammation or malignant disease, serum ferritin concentration may be misleadingly high, and thus transferrin saturation <20% may be a more accurate measure of iron deficiency. IV iron may be considered for the treatment of refractory RLS/WED during the second or third trimester of pregnancy and the postpartum period, if there is the failure of oral iron, and serum ferritin is <30 mcg/L. The preparations to consider for use are low-molecular-weight iron dextran (InFed), ferric carboxymaltose (Injectafer), and iron sucrose (Venofer) (13-16).

The second is behavioral and non-pharmacological treatments, especially during pregnancy (15).

1.4. Pharmacological treatment of restless legs syndrome in pregnancy

RLS's pharmacological treatment in pregnant women includes dopaminergic agents, opioids, benzodiazepines, anticonvulsants, iron, and oestrogen therapy (Table 1; 18-22). However, clinical trials and evidence-based treatments are not available for the pharmacological treatment of RLS in pregnant women. Therefore, pharmacological approaches should be avoided as much as possible; however,more reliable drugs should be considered if symptoms are severe (18).

1.5. Non-pharmacological treatment of restless legs syndrome in pregnancy

Lifestyle changes and non-pharmacological treatments are the basis of RLS treatment. It is important to control aggravating factors like an iron deficiency, prolonged inactivity, using serotonergic antidepressants, soothing antihistamines, dopamine antagonists (antiemetics, antipsychotics), lack of sleep, sleep apnea, hypoxia, caffeine, tobacco, alcohol, pain, peripheral neuropathy, radiculopathy, venous insufficiency, and inflammatory/ immunological conditions in symptom management (Table 2).

Progressive relaxation exercise or listening to relaxing background music can reduce the severity of RLS and increase sleep quality (23). Hot or coldwater application maybe effective in symptom control (24,25) (Table 3), and it is stated in studies that sleep hygiene education improves sleep quality (21; Table 4). In addition, in mild cases, leg stretching and the use of elastic stockings before sleep (27), yoga and moderate exercise (28), leg massage, and pneumatic compression devices (29,30), if needed is recommended.

Table 1.Pharmacological Treatment Method Recommendations for RLS Symptom Management during Pregnancy and Breastfeeding

Treatment	Pregnancy	Lactation	Safety Concern	Efficacy Concern	Comments
Alpha-2-delta ligands					
Gabapentin	3	2			↓ synaptogenesis in rats; unresolved issue of generalizability to human pregnancy
Gabapentin enacarbil	3	3			Very limited data
Pregabalin	3	3			Very limited data
Benzodiazepines/BZRA					For hyperarousal/sleep disturbance component of RLS
Clonazepam	2[a]	2			Limit to 0.25 1 mg in the evening
Eszopiclone	4	4	x		No data
Temazepam	4/5	4	xx		Fetal loss with diphenhydramine; FDA X category
Zolpidem	4	4	x		Concerns about sedation/amnesia, parasomnias/sleep-related eating
Dopaminergics					Inhibit prolactin and can diminish breast milk production
Bromocriptine	4	5	x		Ergot; fibrotic reaction risk for all three ergots
Cabergoline	4	5	x		Ergot
Carbidopa/levodopa	2	3			Not with benserazide (may affect bones in children)
Pergolide	4	5	x		Ergot
Pramipexole	3	3			
Ropinirole	3	3			
Rotigotine	3	3			
Opioids					If severe, refractory; lowest dose & duration possible
Codeine	4	3	x		
Hydrocodone	4	3			
Methadone	3	3	x		Neonatal withdrawal & sudden infant death syndrome risks
Oxycodone	2[a,b]	3			
Propoxyphene	5	5	xx	x	Withdrawn in US due to cardiac arrhythmia deaths
Tramadol	4	2[b]			Lesser efficacy than other opioids
Other					
Clonidine	4	4		x	Not that effective
Trazodone	3	3			0.6% of maternal dose to infant; helps sleep without worsening PLMS
Carbamazepine	4	4	x	x	Not that effective; associated with major malformations
If comorbid depression					
Bupropion	2	2			Lowest effective dose; caution if premature/ill neonate Most other antidepressants may aggravate RLS and/or PLMS

BZRA: benzodiazepines/benzodiazepine receptor agonist; FDA: US Food and Drug Administration; PLMS: periodic limb movements in sleep; RLS: restless legs syndrome; Ratings; 1) Recommended (high level of evidence for safety/effectiveness); 2) May be considered (evidence for safety/effectiveness); 3) Insufficient evidence to reach consensus; 4) Probably should not be considered (evidence for risk/ineffectiveness); 5) Not recommended (high level of evidence for risk/ineffectiveness).
The following treatments were reviewed but not rated due to insufficient evidence for efficacy in non-pregnancy RLS/WED: forehead wrapping, injection of Morton neuroma,
L-tyrosine, sour cherry extract, rifaximin for small intestinal bacterial overgrowth, amantadine, diazepam, levorphanol, botulinum toxin, and deep brain stimulation
[a]Avoid use during 1st trimester. [b] If RLS/WED is very severe and not responsive to other treatments

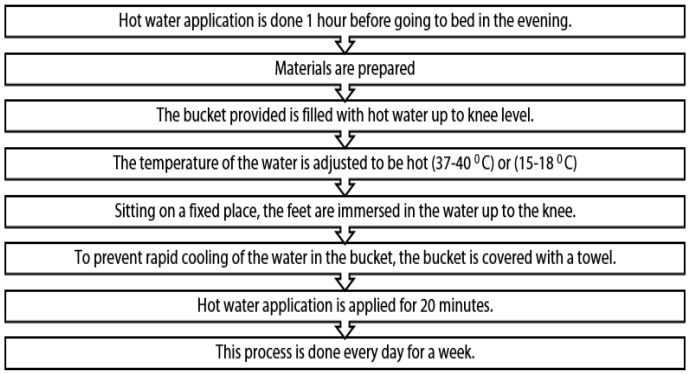
Referance: Picchietti DL, Hensley JG, Bainbridge JL, Lee KA, Manconi M, McGregor JA, et al. Consensus clinical practice guidelines for the diagnosis and treatment of restless legs syndrome/Willis-Ekbom disease during pregnancy and lactation. Sleep Med Rev [Internet]. 2015 Aug [cited 2022 May 22]; 22: 64-77. Available from: https://www.sciencedirect.com/science/article/pii/S1087079214001191?casa_token=Jk9074eVTjEAAAAA:bOzySMtogZjastMod0D1w7P22FjxFa9qAGmx5lBmAlNzMjW6-2n1uu5wogY33WPivH_eobI2bM8 DOI: 10.1016/j.smrv.2014.10.009; Trenkwalder C, Paulus W. Restless legs syndrome: pathophysiology, clinical presentation and management. Nature Reviews Neurolog [Internet]. 2010 Jun [cited 2022 May 22]; 6(6): 337-46. Available from: https://www.nature.com/articles/nrneurol.2010.55 DOI: 10.1038/nrneurol.2010.55; Garcia-Borreguero D, Kohnen R, Silber MH, Winkelman JW, Earley CJ, Högl B. et al. The long-term treatment of restless legs syndrome/Willis-Ekbom disease: Evidence-based guidelines and clinical consensus best practice guidance: a report from the International Restless Legs Syndrome Study Group. Sleep Med [Internet]. 2013 Jul [cited 2022 May 22]; 14: 675–84. Available from: https://www.sciencedirect.com/science/article/pii/S1389945713002116 DOI: 10.1016/j.sleep.2013.05.016; Hurault-Delarue C, Montastruc JL, Beau AB, Lacroix I, Damase-Michel C. Pregnancy outcome in women exposed to dopamine agonists during pregnancy: a pharmacoepidemiology study in EFEMERIS database. Arch GynecolObstet [Internet]. 2014 Mar [cited 2022 May 22]; 290(2): 263-70. Available from: https://link.springer.com/article/10.1007/s00404-014-3210-z DOI: 10.1007/s00404-014-3210-z; Whiteman VE, Salemi JL, Mogos MF, Cain MA, Aliyu MH, Salihu HM. Maternal opioid drug use during pregnancy and its impact on perinatal morbidity, mortality, and the costs of medical care in the United States. J Pregnancy [Internet]. 2014 Aug [cited 2022 May 22]; 2014. Available from: https://www.hindawi.com/journals/jp/2014/906723/ DOI: 10.1155/2014/906723

Table 2. Aggravating Factors for Restless Legs Syndrome in Pregnancy

Known Factors	Suspicious Factors
Iron deficiency	Soothing antihistamines
Prolonged inactivity (travel by plane, car, etc.)	Dopamine antagonists (antiemetics, antipsychotics)
Serotonergic antidepressants	Lack of sleep
	Sleep apnea
	Hypoxia
	Caffeine
	Tobacco
	Alcohol
	Pain
	Peripheral neuropathy
	Radiculopathy
	Venous insufficiency
	Inflammatory/immunological conditions

Reference: Picchietti DL, Hensley JG, Bainbridge JL, Lee KA, Manconi M, McGregor JA, et al. Consensus clinical practice guidelines for thediagnosis and treatment of restless legs syndrome/Willis-Ekbom disease during pregnancy and lactation. Sleep Med Rev [Internet]. 2015 Aug [cited 2022 May 22]; 22: 64-77. Available from: https://www.sciencedirect.com/science/article/pii/S1087079214001191?casa_token=Jk9074eVTjEAAAAA:bOzySMtogZjastMod0D1w7P22FjxFa9qAGmx5lBmAlNzMjW6-2n1uu5wogY33WPivH_eobI2bM8 DOI: 10.1016/j.smrv.2014.10.009

Table 3. Hot/Cold Water Application Protocol in the Management of Restless Legs Syndrome Severity for Pregnant Women



Reference: Kaplan Ö, Başer M. Huzursuz bacak sendromu olan gebelerde sıcak su uygulamasının etkisi: randomize kontrollü çalışma. 6 International Gevher Nesibe Health Sciences Conference, [Internet]. 2020 Nov [cited 2022 May 22]; 5-6. Available from: https://6e9ed515-8cbf-4760-8640-9a7779db5794.filesusr.com/ugd/614b1f_84a6bd676e2f45f1b414856cccaa54ff.pdf; Kaplan Ö. The effect of hot and cold water application to pregnant women with restless leg syndrome on complaints and quality of sleep [dissertation on the internet]. Türkiye (TR): University of Erciyes; 2022. [cited 2023 Feb 20]; Available from: https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Table 4. Nursing Education Content to Improve Sleep Quality in Pregnant Women with Restless Legs Syndrome

Things to do for a restful sleep	**Sleep hygiene principles**
Do not go to bed before sleep.	For short-term sleep problems, drugs should not be used.
Go to bed and get up at the same time every day.	Even if you go to bed late at night for any reason, get up at the same time in the morning and start your daily life.
Meals should be consumed regularly and at least 2-3 hours before bedtime.	Not to use stimulants such as tea, coffee, and cigarettes during the day, especially in the afternoon and evening.
Before going to bed, unwind and relax.	Avoid sleeping during the day, even when feeling very tired; thus, concentrating sleep in the night hours.
The lighting and temperature of the bedroom should be reduced and adjusted to be comfortable.	Eat a light dinner and do not eat close to bedtime.
When you feel tired, you can go to bed and read a book until you fall asleep.	Not using the bedroom for activities other than sleep and sexual intercourse.
Caffeinated beverages should not be consumed before going to bed.	Avoiding activities such as watching TV or reading in bed.
After dinner, fluid intake should be restricted.	Reducing noise/sounds. Paying attention to the normal temperature of the room (not too hot or too cold).
A warm shower can be taken before going to bed.	Doing light exercises a few hours before bedtime but avoiding too strenuous movements just before sleep.
Daily light exercises can be done to feel good and to ensure blood circulation.	Not to go to bed before sleep; 20-30 minutes after going to bed. getting out of bed in case of not falling asleep; not forcing yourself to sleep; doing other activities that can encourage relaxation.
Lying on the back should be avoided.	
To ensure circulation in the legs, lie in the left lying position.	
When going to bed, worrying issues and unfinished business should be avoided.	

Reference: Yüksel E. Effects of progressive relaxation exercises on restless legs syndrome severity and sleep quality in pregnant women [dissertation on the internet]. Türkiye (TR): University of Ege; 2017. [cited 2022 May 22]; Available from: https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Although there is no good evidence supporting their efficacy in pregnant women, it is stated that using these methods isnot have any significant side effects. Therefore, all pregnant women can use them regardless of RLS (18,24-26; Table 5.)

1.6. The effect of restless legs syndrome on maternal and infant health during pregnancy

According to the data obtained from the studies, it is shown that RLS may harm pregnant women. Pregnant women with RLS experience more complications related to pregnancy and delivery, such as the threat of miscarriage, preterm birth, dystocia, and intrauterine growth retardation compared to healthy pregnant women (3,31). Ramirez et al. stated that the probability of developing preeclampsia is high in pregnant women with RLS symptoms (32). RLS is associated with the depressive mood in pregnant women (8). It is also reported that moderate-to-severe RLS occurring before pregnancy increases the risk of perinatal and postnatal depression (33). RLS during pregnancy has also been associated with sleep disturbances, insomnia, and early morning awakening. Sleep disorders associated with RLS may adversely affect pregnancy. It has been reported that the rate of cesarean delivery in pregnant women with sleep disorders is higher than healthy pregnant women. It is thought that insufficient sleep during pregnancy may increase the probability of operative delivery by causing labor to take longer (8,31,34).

Although RLS symptoms disappear soon after delivery, approximately one-third of women with RLS during pregnancy is reported to still have symptoms three years after delivery. Similarly, Cesnik et al. (2010) reported that even the transient presence of RLS during pregnancy could increase the risk of chronic RLS fourfold compared to the control population who had never experienced RLS during pregnancy. In addition, it is stated that the occurrence of RLS in one pregnancy increases the risk of RLS in subsequent pregnancies approximately 19 times (11).

Table 5. Non-Pharmacological Management Recommendations for Restless Legs Syndrome Symptom Management DuringPregnancy and Lactation

Treatment	Pregnancy	Lactation	Safety Concern	Efficacy Concern	Comments
Non-pharmacological Treatment					
Acupuncture	3	3		x	
Avoiding the aggravating factor	Yes	Yes			*Known Factors:* Iron deficiency, prolonged inactivity (travel by plane, car, etc.), serotonergic antidepressants. *Suspicious Factors:* Soothing antihistamines, dopamine antagonists (antiemetics, antipsychotics), sleep deprivation, sleep apnea, hypoxia, caffeine, tobacco, alcohol, pain, peripheral neuropathy, radiculopathy, venous insufficiency, inflammatory/immunological conditions.
Cognitive-behavioral	3	3		x	
Exercise - moderate	2nd	2nd			Pain, dehydration, abdominal trauma, avoid late in the evening; Obtain obstetrician approval
Exercise - vigorous	4	3-4	x	x	If exercise is painful, it can aggravate RLS.
Hypnosis	3	3		x	
Massage	2nd	2nd			Avoid if severe/profound or history of coagulation disorder
Meditation/Music/Prayer	3	3		x	
Mental Activity	3	3		x	
Near-Infrared Therapy	3	3	x	x	Nitric oxide is produced and causes vasodilation
Pneumatic Devices	2nd	2nd			Appears to be safe, effective
Sexual Activity	3	3		x	
Obstructive sleep apnea treatment	2nd	2nd			
Vibration	3	3		x	
Yoga	2nd	2nd			Is it the same as moderate exercise?
Nutracotics					
Chinese herbs	3	3	x	x	
Cat grass	4	4	x	x	It has not been proven safe in pregnancy; diazepam-like effects
Vitamins and Minerals					
Folate	3	3		x	Effects not safe
Iron-oral	2nd	2nd			Ferritin <75 is beneficial; if <30 probability of benefit
Iron- IV	2nd	3			If there is ferritin <30 and oral iron deficiency
Magnesium	4	4		x	Effects not safe
Vitamin C	3	3	x	x	Premature birth/fetal loss may increase
Vitamin D	3	3	x	x	High dose teratogenic in animals
Vitamin E	3	3	x	x	It is not recommended to exceed the minimum daily dose.

Ratings: 1) Recommended (elevated level of evidence for safety/efficacy); 2) Acceptable (proof of safety/efficacy); 3) Insufficient evidence to reach consensus; 4) Not to be considered (evidence of risk/ineffectiveness); 5) Not recommended (elevated level of evidence for risk/efficacy).

Referance: Picchietti DL, Hensley JG, Bainbridge JL, Lee KA, Manconi M, McGregor JA, et al. Consensus clinical practice guidelines for the diagnosis and treatment of restless legs syndrome/Willis-Ekbom disease during pregnancy and lactation. Sleep Med Rev [Internet]. 2015 Aug [cited 2022 May 22]; 22: 64-77. Available from: https://www.sciencedirect.com/science/article/pii/S1087079214001191?casa_token=Jk9074eVTjEAAAAA:bOzySMtogZjastMod0D1w7P22FjxFa9qAGmx5lBmAlNzMjW6-2n1uu5wogY33WPivH_eobI2bM8 DOI: 10.1016/j.smrv.2014.10.009

1.7. Nursing approach to restless legs syndrome in pregnancy

Although it is a common syndrome in pregnancy, RLS is often overlooked or neglected (1). Symptoms usually worsen during pregnancy and regress during delivery. Therefore, RLS is often not distinguished from other common pregnancy-related conditions and is viewed as a pseudophysiological pregnancy-related phenomenon. There are also misconceptions that RLS cannot significantly affect pregnant women. In contrast, RLS may present with severe symptoms and have adverse effects on pregnancy. In addition, even in mild clinical conditions of the syndrome that do not require treatment, RLS should be diagnosed. Pregnant women should receive support and education tounderstand their symptoms better and reduce their worries and concerns (18).

One of the 2030 Sustainable Development Goals of the United Nations, aims to ensure a healthy and quality life for all ages to 'Healthy and Quality Life.' In this context,' reducing deaths from non-communicable diseases and supporting mental health, ''universal access to sexual and reproductive health, family planning and education,' and 'access to quality primary health care services' are emphasized to achieve the stated goal. Health personnel are expected to provide a quality, standard, safe and qualified service to society, including pregnant women. It is crucial to evaluate the complaints of pregnant women during pregnancy follow-up. Obstetrics and gynecology nurses, who have an important role and responsibility in pregnancy follow-up, should provide effective care to pregnant women with a holistic approach and evidence-based practices. For this reason, it is necessary to have sufficient equipment to follow the latest developments in gestational RLS, conduct

research, and transfer the information needed for the care of pregnant women with RLS (35). In this context, the care and approaches that women's health nurses will plan for pregnant women with RLS can be listed as follows:

• One of the important responsibilities of the nurse is to organize programs and training on gestational RLS to raise awareness. An essential element of education is that pregnant women are aware of how their illness can affect and reduce their quality of life (18). In this direction, the nurse should include the causes, symptoms, and management of the syndrome and the proven effects on the pregnancy process, delivery, and fetal health in the content of the training to be given to the pregnant women.

• Women who had RLS before pregnancy should be advised to seek counseling from their physicians for treatment changes (35).

• It is important to make detailed inquiries and obtain information about RLS while questioning the health history in the follow-up and care of pregnant women. Suspicion of RLS must be confirmed by collecting data on the basic criteria for diagnosing the syndrome.

• Whether RLS affects pregnant women's living spaces should also be questioned: "How do you sleep?" "Is there anything preventing you from falling asleep?" It can encourage the pregnant woman to explain the syndrome's symptoms, even if it is not the reason for seeking health care.

• After confirming the presence of RLS diagnostic criteria, the pregnant woman should be advised to consult a doctor and give blood to check laboratory findings. After making the diagnosis, the nurse should educate the pregnant woman by explaining the disease process (18,35).

• Interventions should improve sleep quality (23-25; See Table 4) and reduce RLS's severity in pregnant women. As a part of non-drug treatment, avoidance of stimulants such as caffeine, nicotine, alcohol, or other psychoactive substances listed in Table 2 should be given to reduce body weight and reduce both triggers and aggravating factors of RLS symptoms. Pregnant women should be encouraged to take the initiatives specified in the title of the non-pharmacological methodto reduce the severity of RLS, (18,35).

• Nurses should also pay attention to hospitalized pregnant womenwho have RLS. In cases where pregnant women with RLS do not provide sufficient relief, they should be able to relieve symptoms by taking frequent walks. It is vital to provide adequate space for movement in perinatology services (35).

• Nurses should support the communication of hospitalized pregnant women with RLS with their families. Psychological support should be provided when necessary (35,36).

• Risky conditions such as preeclampsia, preterm birth risk, and cesarean delivery may be seen more in pregnant women with RLS than healthy pregnant women. (3,32,33). For this reason, it is important to follow the pregnant women in terms of complications and evaluate their fetal well-being.

• The disease symptoms intensify significantly in the third trimester of pregnancy (3). Women need the support and help of nurses most during this period. Therapeutic communication alone can bring positive results by causing an increase in self-confidence (35,36).

• In addition, these women should be followed up during the postpartum period, and the continuation of the syndrome should be questioned. If necessary, they should be referred to the physician, and information should be given about the possibility of RLS in subsequent pregnancies.

• Another of the roles and responsibilities of the nurse is to do research. It is vital to conduct research to determine the risk factors related to gestational RLS, its prevalence, and its effects on maternal and infant health, and reduce the severity of RLS and complaints related to the syndrome. The results obtained should be shared with academic and clinical stakeholders to be used in the follow-up and care of pregnant women (37).

2. Conclusion and Recommendations

Restless legs syndrome, which is common in pregnant women, negatively affects the quality of life of women. Early diagnosis of RLS, which also has adverse effects on pregnancy, is vital. For this reason, every pregnant woman with a sleep disorder should be asked questions about RLS using the basic diagnostic criteria of the IRLSWG. Non-pharmacological approaches, especially iron supplementation, should be used in treatment.

Obstetrics and gynecology nurses, who have a crucial role and responsibility in pregnancy follow-up, should provide effective and quality care to women in line with evidence-based practices with an integrated approach. In this direction, it is recommended to conduct awareness studies for nurses and pregnant women about gestational RLS, experimental studies on RLS symptom management, and attempts to transfer literature knowledge to clinical practices.

3. Contribution to the Field

In this review, RLS is neglected disease in pregnancy, is included. Unlike the literature, specific interventions that nurses can do in the care of pregnant women with this disease are included. In this way, it is thought that it will be a guide for nurses in clinical practice.

Conflict of Interest

This article did not receive any financial fund. There is noconflict of interest regarding any person and/or institution.

Authorship Contribution

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