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RESTLESS LEG SYNDROME

Mrs. Rosamma Joseph,

Assistant professor, T John College of Nursing, Bangalore, INDIA

ABSTRACT

Restless legs syndrome, also known as Willis-Ekbom disease, is a common condition of the nervous system that causes an overwhelming, irresistible urge to move the legs. The symptoms typically occur while sitting or lying down. It generally worsens with age and can disrupt sleep. The main symptom is a nearly irresistible urge to move the legs. The sensations in the legs include aching, throbbing, pulling, itching, crawling, or creeping. Based on cause it may be primary or secondary. When the cause is not known it is classified as primary and if the condition occurs as a result of preexisting disease conditions like iron deficiency anemia, chronic kidney disease, diabetes etc. it is classified as secondary. Obesity, stress, excessive intake of caffeine, intake of medications like antidepressants, antipsychotics, lithium etc may act as triggers. While the cause is not known in most of the cases, a genetic predisposition is found in many cases. The diagnosis is based on the presence of symptoms like an urge to move the limbs with or without sensations, improvement with activity, worsening at rest and worsening in the evening or night. Treatment includes solving the underlying problem, lifestyle changes like stopping alcohol and tobacco, and sleep hygiene and medications like levodopa or a dopamine agonist. The associated comorbidities are cardiovascular diseases, sleep apnea and ADHD.

Keywords: Restless leg syndrome, sleep, types, causes, treatment, diagnosis.

INTRODUCTION

RLS is one of several disorders that can cause exhaustion and daytime sleepiness, which can strongly affect mood, concentration, job and school performance, and personal relationships. RLS is classified as a sleep disorder since the symptoms are triggered by resting and attempting to sleep, and as a movement disorder, since people are forced to move their legs in order to relieve symptoms. It is, however, best characterized as a neurological sensory disorder with symptoms that are produced from within the brain itself. Many people with RLS report they are often unable to concentrate, have impaired memory, or fail to accomplish daily tasks. Untreated moderate to severe RLS can lead to about a 20 percent decrease in work productivity and can contribute to depression and anxiety. It also can make traveling difficult.

It is estimated that up to 7-10 percent of the U.S. population may have RLS. RLS occurs in both men and women, although women are more likely to have it than men. It may begin at any age. Many individuals who are severely affected are middle-aged or older, and the symptoms typically become more frequent and last longer with age. In India fewer than a million cases are reported each year.

Definition

Restless legs syndrome, also known as Willis-Ekbom disease, is a common condition of the nervous system that causes an overwhelming, irresistible urge to move the legs.

Signs and symptoms

The symptoms typically occurs while sitting or lying down .The client experiences unpleasant sensations in the leg which causes an irresistible urge to move the legs . The sensations may also affect arms, chest and face too. It has been described as:

- tingling, burning, itching or throbbing
- a "creepy-crawly" feeling
- feeling like fizzy water is inside the blood vessels in the legs
- a painful, cramping sensation in the legs, particularly in the calves
- involuntary jerking of the legs and arms, known as periodic limb movements in sleep (PLMS).

These unpleasant sensations can range from mild to unbearable, and are usually worse in the evening and during the night. They can often be relieved by moving or rubbing your legs. Some people have the symptoms of restless legs syndrome occasionally, while others have them every day. The symptoms can vary from mild to severe. In severe cases, restless legs syndrome can be very distressing and disrupt a person's daily activities.

Types

Based on etiology:

1. primary – due to unknown etiology
2. secondary -occur as a complication of another health condition, or it can be the result of another health-related factor. This is known as secondary restless legs syndrome.

Based on time of onset:

1. early onset- symptoms occur before 40years
2. late onset- symptoms occur after 40years

Secondary restless legs syndrome may be seen in clients who:

- **have iron deficiency anaemia** – low levels of iron in the blood can lead to a fall in dopamine, triggering restless legs syndrome
- **have a long-term health condition** – such as chronic kidney disease, diabetes, Parkinson's disease, rheumatoid arthritis, an underactive thyroid gland, or fibromyalgia
- **are pregnant** – particularly from week 27 until birth; in most cases the symptoms disappear within four weeks of giving birth

Triggers

There are a number of triggers that don't cause restless legs syndrome, but can make symptoms

worse. These include:

- medications such as some antidepressants, antipsychotics, lithium calcium channel blockers , some antihistamines, metoclopramide
- excessive smoking, caffeine or alcohol
- being overweight or obese
- stress
- lack of exercise

Causes

In many cases, the exact cause of restless legs syndrome is unknown. When no cause can be found, it's known as "idiopathic" or primary restless legs syndrome.

1. family history- specific genes responsible for disorder have been identified.
2. falling dopamine levels
3. underlying health condition- iron deficiency anemia, pregnancy
4. long term diseases- chronic kidney disease, Parkinson's disease, rheumatoid arthritis, diabetes, underactive thyroid gland.

Diagnosis

There's no single test for diagnosing restless legs syndrome. Diagnosis is based on *symptoms – keeping a sleep diary

- medical and family history,
- a physical examination, and
- test results.-blood tests to rule out anemia, kidney disorder, diabetes; suggested immobilisation test, polysomnography

Criteria for diagnosis

In 2003, a US National Institutes of Health (NIH) panel modified their criteria to include the following:

- An urge to move the limbs with or without sensations.
- Improvement with activity. Many patients find relief when moving and the relief continues while they are moving.
- Worsening at rest. Patients may describe being the most affected when sitting for a long period of time, such as when traveling in a car or airplane, attending a meeting, or watching a performance.
- Worsening in the evening or night. Patients with mild or moderate RLS show a clear circadian rhythm to their symptoms, with an increase in sensory symptoms and restlessness in the evening and into the night.

Assessment of symptoms should be carried out in terms of:

- how often symptoms are occurring
- how unpleasant are the symptoms
- whether the symptoms cause significant distress
- whether sleep is disrupted, making the client tired during the day

Treating restless legs syndrome

Mild restless legs syndrome that isn't linked to an underlying health condition can be managed with just a few lifestyle changes. If symptoms are more severe, medication may be needed. Restless legs syndrome caused by an underlying health condition can often be cured by treating that condition. For example, iron deficiency anaemia can be treated by taking iron supplements. If it's associated with pregnancy, it usually disappears on its own within four weeks of the birth.

A. Lifestyle changes

A number of lifestyle changes may be enough to ease the symptoms of restless legs syndrome. These include:

- **avoiding stimulants in the evening** – such as caffeine, tobacco and alcohol
- **not smoking**
- **taking regular daily exercise**
- **practising good sleep habits** – for example, going to bed and getting up at the same time every day, not napping during the day, taking time to relax before going to bed, and avoiding caffeine close to bedtime
- **avoiding medicines that trigger the symptoms or make them worse**

During an episode of restless legs syndrome, the following measures may help relieve symptoms:

- massaging your legs
- taking a hot bath in the evening
- applying a hot or cold compress to your leg muscles
- doing activities that distract your mind, such as reading or watching television
- relaxation exercises, such as yoga or tai chi
- walking and stretching

A small medical trial carried out in 2011 found a type of osteopathic exercise technique called **positional release manipulation** could be of benefit to people with restless legs syndrome. It involves holding different parts of the body in positions found to reduce feelings of pain and discomfort.

B. Medications

1. Dopamine agonists- They work by increasing dopamine levels, which are often low. Dopamine agonists that may be recommended include: ropinirole, pramipexole, rotigotine skin patch

2. Painkillers

A mild opiate-based painkiller, such as codeine or tramadol, may be prescribed to relieve pain associated with restless legs syndrome.

3. Benzodiazepines

If restless legs syndrome is disrupting sleep, a short-term course of medications such as temazepam and loprozalam.

4. Levodopa

Levodopa is recommended if there are occasional symptoms of restless legs syndrome.

5. Antiseizure drugs- Gabapentin enacarbil, pregabalin to relieve creepy crawly symptoms.

Comorbidity

Recent research found people with restless legs syndrome may be up to twice as likely to develop cardiovascular disease, such as coronary heart disease or stroke, compared with people who do not have the syndrome. This risk is thought to be greatest in people with frequent or severe syndrome. The exact reason for the increased risk is unclear, but it may be that the rapid leg movements are associated with an increased heart rate and blood pressure. Sleep problems have also been linked to cardiovascular disease. To reduce this risk, exercise regularly, maintain a healthy weight, give up smoking if you smoke, and eat a healthy, balanced diet.

There is a higher prevalence of RLS and PLMS in sleep-disordered breathing patients, particularly those with obstructive sleep apnoea (OSA), the most common sleep disorder in western societies. Untreated OSA can lead to adverse cardiovascular consequences due to cardio-metabolic dysfunction. ADHD is a condition that is seen in many patients having restless leg syndrome.

CONCLUSION

RLS rarely results in any serious consequences. However, recurring severe symptoms may cause considerable mental distress, loss of sleep, and daytime sleepiness. Because the condition is worse while resting, people with severe RLS may avoid activities that involve extended periods of sitting, such as attending movies or travelling long distances. These effects can be avoided if RLS is diagnosed and measures to promote sleep are adopted by the clients.

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