Evaluation and Treatment of Restless Legs Syndrome in the Primary Care Environment

Benjamin A. Smallheer, PhD, RN, ACNP-BC, FNP-BC, CCRN, CNE

KEYWORDS

• Restless legs syndrome • Primary care • Willis-Ekbon disease • Evaluation
• Treatment

KEY POINTS

- Restless legs syndrome/Willis-Ekbon disease (RLS/WED) is a common sensorimotor disorder characterized by an urge to move.
- RLS/WED is associated with an uncomfortable sensation typically in the lower extremities.
- Iron deficiency, dopaminergic neurotransmission abnormalities, genetics, sleep deprivation, immobilization, and/or use of medications can play key roles in the pathogenesis of primary (idiopathic) RLS.
- Identification and treatment through a thorough subjective evaluation and complete neurologic examination are essential in the diagnosis of RLS/WED.
- Dopaminergic agents and alpha-2-delta calcium channel ligands are the more common and effective pharmacologic agents used to treat RLS.

INTRODUCTION

Restless legs syndrome (RLS) is a common neurologic sensorimotor disorder characterized by an irresistible urge to move the legs repetitively. Also referred to as Willis-Ekbom disease (WED), this syndrome has undergone increasing research over the past decade; there is now a more complete understanding of its cause, diagnostic criteria, and treatment algorithms.

The Diagnostic Classification of Sleep and Arousal Disorders, produced by the International Restless Legs Syndrome Study Group (IRLSSG), classified RLS/WED as a disorder of initiating and maintaining sleep and of excessive somnolence. Individuals experience "extremely disagreeable deep sensations of creeping inside the calves whenever sitting or lying down."[1] This sleep-related disorder of movement is associated with discomfort and dysesthesia, occurs more during periods of inactivity (ie, at night), and, thus, interferes with sleep.

Duke University School of Nursing, 307 Trent Drive, DUMC Box 3322, Durham, NC 27710, USA
E-mail address: benjamin.smallheer@duke.edu

Nurs Clin N Am 53 (2018) 433–445
https://doi.org/10.1016/j.cnur.2018.04.010 **nursing.theclinics.com**

RLS is typically described as a nocturnal disorder based on its profound disturbance of sleep.[2,3] As a result, this circadian disturbance has been shown to have a cascading impact on both physiologic and psychological health, ultimately affecting mood and quality of life.[1,3]

PREVALENCE, EPIDEMIOLOGY, AND CAUSE

In 1672, English physician and anatomist Sir Thomas Willis became the first to describe RLS.[4,5] Later, in 1763, symptoms comparable with RLS were described by French physician and botanist François Boissier de Sauvages, in 1849 by Swedish physician and professor Magnus Huss, and in 1898 by French physician Georges Gilles de la Tourette.[4] The term *restless legs syndrome* was introduced in 1945 by the Swedish neurologist Karl Axel Ekbom, who conducted the first clinical and epidemiologic studies on the topic. In 1995, the IRLSSG developed the initial RLS standardized diagnostic criteria, which have since been updated.[4,5]

RLS/WED affects 5% to 15% of adults in the United States and Northern Europe, with a higher prevalence in women than men at a ratio of almost 2:1. This increased risk in women is thought to be related to parity, as the incidence in nulliparous women is similar to the incidence seen in men. Women who have been pregnant have a 2 times increased risk for developing RLS compared with nulliparous women. During pregnancy, RLS/WED has been identified in 13.5% to 26.6% of pregnant woman. It tends to develop more frequently during the third trimester but becomes more severe over the duration of the pregnancy.[3,6] Additionally, women who have experienced transient RLS during pregnancy have a 4 times increased risk for developing persistent RLS over the life course.[1,2,7–9]

The incidence of RLS in children occurs in 2% to 4% of school-aged children and adolescents. Of these children, symptoms range from mild to severe, with 25% to 50% of children reporting moderate to severe symptoms. Predictably, the incidence is higher among children whereby a family history reveals parents with RLS.[2,7]

RLS has been shown to occur less frequently in African Americans compared with Caucasians despite all other confounding risk factors.[8] More developed research has shown that, in addition to affecting the lower extremities, RLS/WED has also been reported to affect the arms.[3] RLS is traditionally considered a chronic, lifelong disease that worsens with time. Periods of remission are common, especially in younger adults; relapse is not uncommon or unexpected.[1,3,10] These various presentations of RLS have been known to fluctuate depending on the cause of the syndrome. For example, incidents associated with pregnancy often disappear within the first month following delivery.[6] Additionally, occurrences of RLS/WED associated with other reversible causes, such as iron deficiencies or uremia, may diminish following correction of the causative factors.

SYMPTOM PRESENTATION

Individuals use a variety of terms to describe the sensations associated with RLS/WED. Dysesthesia sensations are typically relieved by movement, exacerbated by rest or inactivity, and worse in the evening/night.[10] Symptoms are often associated with paresthesias. **Box 1** lists the more common symptoms reported by patients living with RLS/WED.

RLS/WED is commonly associated with the disorder known as periodic limb movements of sleep (PLMS), which is described as involuntary and repetitive cramping and jerking movements of the legs. The presence of periodic limb movements during sleep