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WILIS –EKBORN DISEASE: A REVIEW

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Abstract

Wilis –Ekborn Disease or otherwise known as Restless Leg Syndrome(RLS) is generally a long-term disorder that causes a strong urge to move one's legs.There is often an unpleasant feeling in the legs that improves somewhat by moving them. Pathophysiology of RLS remains incompletely understood. However, advanced brain imaging studies and positive results of dopaminergic treatment suggest that RLS may be generated by dopamine dysfunction locally within the central nervous system. At present, there is a wide range of treatment options including levodopa, dopamine agonists, opioids, benzodiazepines, antiepileptic drugs and iron supplements.

Keywords: Wilis –Ekborn Disease, Restless leg Syndrome and Chronic Kidney Disease

Definition

Wilis –Ekborn disease is characterized by unpleasant, creeping or crawling sensations deep within the lower legs, most commonly localised between the knees and ankles. It is commonly known as Restless Leg Syndrome.[1]

Restless legs syndrome (RLS) is a neurological disorder, defined by the International Classification of Sleep Disorders as "a disorder characterized by disagreeable leg sensations, usually prior to sleep onset, that cause an almost irresistible urge to move the legs". Often, the uncomfortable sensations are described as creeping, crawling, tingling, aching, burning, pulling, itching, or cramping.[2]

Prevalence

Prevalence of RLS symptoms ranges from 6.6% to 83% . [3]Thus, many patients treated with dialysis due to uraemia, suffer problems with restless legs that are also difficult to manage. RLS occurs both before and after dialysis treatment but can be improved after renal transplantation. RLS occurs in 3% of individuals from the Mediterranean or Middle Eastern regions, and in 1–5% of those from East Asia, indicating that different genetic or environmental factors, including diet, may play a role in the prevalence of this syndrome. RLS diagnosed at an older age runs a more severe course.[4] RLS is even more common in individuals with iron deficiency, pregnancy, or end-stage kidney disease.There are several risk factors for RLS, including old age, family history, and uremia[5]. The prevalence of RLS tends to increase with age, as well as its severity and longer duration of symptoms. People with uremia receiving renal dialysis have a prevalence from 20% to 57%, while those having kidney transplant improve compared to those treated with dialysis.[6]

Types

1. Primary Restless legs syndrome
2. Secondary Restless legs syndrome

Primary Restless legs syndrome

Primary RLS is considered idiopathic or with no known cause. Primary RLS usually begins slowly, before approximately 40–45 years of age and may disappear for months or even years. It is often progressive and gets worse with age. RLS in children is often misdiagnosed as growing pains.

Secondary RLS

It is often has a sudden onset after age 40, and may be daily from the beginning. It is most associated with specific medical conditions or the use of certain drugs.[7]

Causes

- End-stage kidney disease and hemodialysis
- Folate deficiency
- Magnesium deficiency
- Sleep apnea
- Diabetes
- Peripheral neuropathy
- Parkinson's disease
- Autoimmune diseases, such as multiple sclerosis
- Use of alcohol, nicotine products, and caffeine may be associated with RLS.[9]

Risk factors

- Low iron levels
- Kidney failure
- Parkinson's disease
- Diabetes mellitus
- Rheumatoid arthritis
- Pregnancy
- Certain medications such as antidepressants, antipsychotics, antihistamines, and calcium channel blockers.[9]

Signs and symptoms

- Buzzing sensation
- A crawling feeling, or limbs jerking while awake.
- An urge to move, usually due to uncomfortable sensations that occur primarily in the legs, but occasionally in the arms or elsewhere.
- Motor restlessness, expressed as activity, which relieves the urge to move.
- Worsening of symptoms by relaxation.
- Variability over the course of the day-night cycle, with symptoms worse in the evening and early in the night.
- Restless legs feel similar to the urge to yawn, situated in the legs or arms.[10]

Treatment

- Lifestyle modifications
- Adopting improving sleep hygiene,
- Regular exercise, and
- Stopping smoking.[11]

Medications

- Dopamine agonists or gabapentin in those with daily restless legs syndrome,
- Opioids for treatment of resistant cases.
- Intravenous iron supplementation, randomized, placebo-controlled trials on iron treatment in RLS are still few. However, Sloand *et al.* showed that iron dextran infused in patients with end stage renal disease decreased RLS symptoms significantly when compared with placebo but the efficacy persisted only for 2 weeks[12]

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