Restless legs syndrome (RLS) also known as Willis-Ekbom disease (WED) is a neurological movement disorder characterised by a compelling urge to move the legs usually accompanied by uncomfortable and unpleasant sensations. Despite being a common disorder, it is generally under diagnosed. The prevalence in the general population is around 1-29% and increases with age (around 19% at age 80 and over). It is reported to be more common in women than in men.

Department of Neurology – Restless legs syndrome (RLS) also known as Willis-Ekbom disease (WED) treatment algorithm

RLS/WED is a neurological movement disorder characterised by a compelling urge to move the legs usually accompanied by uncomfortable and unpleasant sensations. Despite being a common disorder, it is generally under diagnosed. The prevalence in the general population is around 1-29% and increases with age (around 19% at age 80 and over). It is reported to be more common in women than in men.

Diagnosis of RLS/WED (see note 1)

Screen for mimics of RLS/WED/underlying causes (see note 2)

Address mimics/underlying causes (see note 3)

Recommend non-pharmacological treatment (see note 4)

Consider medication in patients with symptoms that significantly impair quality of life (see note 5)

Notes:

1) Establish diagnosis
Diagnostic criteria – International RLS Study Group (RLSSG) rating scale, NIH criteria and ICSD v3 (International Classification of Sleep Disorders)
Symptoms/criteria
- Undesirable sensations in legs that occur before sleep onset or in the evening, can also include periods of inactivity during the day
- Irresistible urge to move the limbs
- Partial or complete relief of the symptoms on movement of the limbs
- Return of the symptoms on cessation of movements
Sleep disturbance is very common in RLS/WED (not a cause, but usually a symptom). Can take longer to fall asleep and more frequent wakening.

2) Screen for mimics/underlying causes
- Renal failure (check renal function, calcium studies)
- Iron deficiency (check ferritin and transferrin – serum ferritin less than 50µg/L associated with severe symptoms)
- Folic acid deficiency
- Hypo-or hyperthyroidism
- Diabetes
- Pregnancy
- Medications (including SSRIs, antipsychotics, antihistamines, dopamine blockers)
- Other causes to be considered (myelopathy, neuropathy, lack of exercise)

3) Address mimics/underlying causes
- Always look for mimics (see note 2) and treat these first.

4) Non-pharmacological treatment
- Consider non-drug based measures first:
  - Sleep hygiene
  - Reduce alcohol and caffeine
  - Stop smoking
  - Pneumatic compression stockings
  - Massage and acupuncture

5) Pharmacological treatment in patients with symptoms that significantly impair quality of life, sleep or daytime functioning
Treatment is challenging due to augmentation effect – rebound of symptoms after initial good response. If augmentation occurs, seek specialist advice.
First line treatment – ropinirole (due to cost and lower augmentation effect).
Second line treatment – rotigotine patch has some evidence of long term efficacy or pramipexole (but greater augmentation effect).
Other treatments (unlicensed use):
- Benzodiazepines (useful for mild to moderate symptoms; improve sleep but perception of symptoms unchanged; side effects and addiction potential; short-acting – useful if insomnia main symptom; intermediate-acting – useful if RLS wakens patient)
- Anticonvulsants – gabapentin (useful in RLS with neuropathic pain; short half life requiring frequent dosing), pregabalin (limited evidence), carbamazepine (poorly tolerated)
- Levodopa (effective but risk of augmentation means not favoured)

6) Refer if symptoms remain troublesome
Consider referral to the Movement disorders (or sleep clinic) if:
- There is doubt about the diagnosis
- The patient has severe symptoms that are refractory to treatment
- Other sleep disorders are present
- Augmentation to levodopa or a dopamine agonist has developed
Discuss with Renal specialist before starting any treatment for RLS in patients with CKD stage 4 or 5.

References:

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