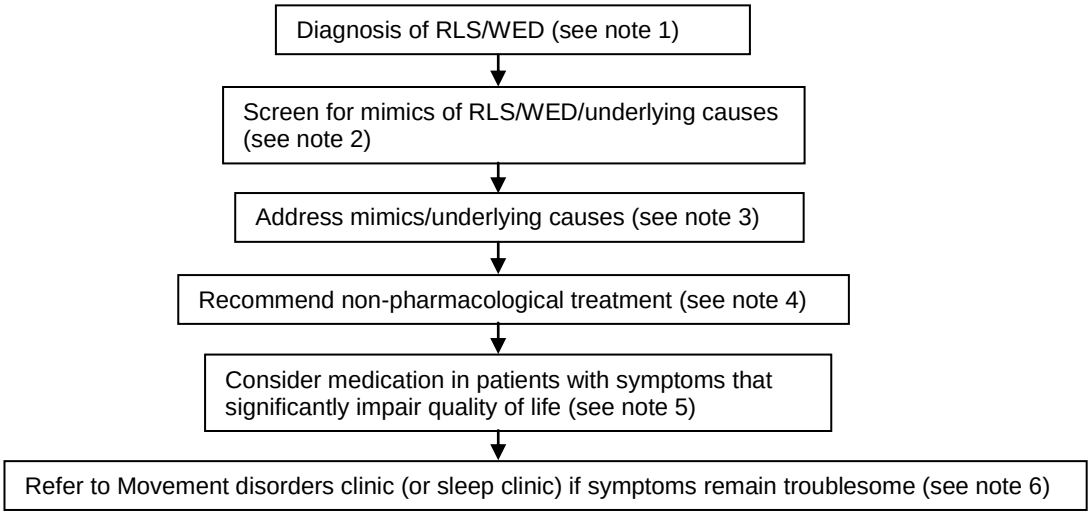
Department of Neurology – Restless legs syndrome (RLS) also known as Willis-Ekbom disease (WED) treatment algorithm

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.



Notes:

1) Establish diagnosis

Diagnostic criteria – International RLS Study Group (IRLSSG) 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 accupuncture

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:

Garcia-Borreguero, D. et al. (2012), European guidelines on management of restless legs syndrome: report of a joint task force by the European Federation of Neurological Societies, the European Neurological Society and the European Sleep Research Society. European Journal of Neurology, 19: 1385–1396. doi: 10.1111/j.1468-1331.2012.03853.x Accessed from: http://onlinelibrary.wiley.com/doi/10.1111/j.1468-1331.2012.03853.x/abstract

Aurora RN et al. The treatment of restless legs syndrome and periodic limb movement disorder in adults – an update for 2012: practice parameters with an evidence-based systematic review and meta-analyses. Sleep (2012) 35 (8): 1039-1062 Accessed from: http://www.aasmnet.org/store/product.aspx?pid=849

Produced by Dr Ian Morrison, Consultant Neurologist, Ninewells Hospital, Dundee with Claire James, Senior Pharmacist Clinical Effectiveness, NHS Tayside Prescribing Support Unit, May 2015 [Review date: May 2018]