Mills and Bone Academy

Educational Article

Phytotherapy for Restless Legs Syndrome – Kerry Bone

Restless legs syndrome is a problem that plagues many patients. It is an unusual sensation (paraesthesia) in the legs which typically occurs at bedtime and is a common cause of insomnia. The sensation has been described as uncomfortable, not painful but more like "creepy crawly, tingling …", which is temporarily relieved by moving the legs.[i] Most people with restless legs syndrome also move their legs once they are asleep. These movements can disrupt their sleep and further add to the daytime drowsiness that the syndrome causes. With some people it can be so extreme that it becomes like torture. They pace the floor in the middle of the night, only to have their symptoms return as soon as they collapse, exhausted, back to bed.

Restless legs syndrome is surprisingly common. Various estimates have ranged from 2% to 15% of the adult population, with the real number likely to be about 6%.[i] It is more common in women.[ii] The older you are, the more likely you are to suffer from restless legs. It is rare in young children and for those older than 65 years around 10% to 28% are affected.[i]

Despite its high occurrence, restless legs syndrome has been described as "the most common disorder you've never heard of",[i] but perhaps not any longer. In 2006 a new drug treatment was launched in the US, with all the associated media fanfare. This newly approved drug is ropinirole (Requip) which was already available as a treatment for Parkinson's disease. It is now the first drug to be ever approved by the FDA for the treatment of restless legs syndrome. No doubt this drug will be launched on the Australian market for this use at some time in the future.

The cause of restless legs syndrome is not known. However, it is known to be associated with a number of medical conditions. For example, iron deficiency, even at levels that do not cause anaemia, seems to predispose to restless legs. From 20% to 57% of people receiving kidney dialysis are also affected.[i] The condition is much more common during pregnancy. One survey of 500 women found that 19% reported restless legs syndrome during pregnancy, that 7% described their symptoms as "severe" and that the condition abated in 96% of affected women within one month of giving birth.[i] Increased symptoms have also been associated with decreased magnesium and folic acid.[i] Magnesium therapy (12.4 mmol/day = 301 mg/day) has been shown to be beneficial.[iii] Obviously these nutritional issues need to be addressed as part of any natural therapy for restless legs and magnesium supplementation is particularly important.

A number of lifestyle factors have been associated with restless legs syndrome. These include heavy smoking, advanced age, obesity, hypertension, loud snoring, use of antidepressant drugs,[ii] diabetes and lack of exercise.[iv] So obviously the more healthy the lifestyle, the less likely one is to suffer from this condition. Intake of alcohol, nicotine and caffeine should be minimised.[i]

Conventional medical treatment for restless legs syndrome focuses on drugs for the nervous system. Some of these drugs are quite powerful and dangerous and should be reserved for more severe cases. In Australia none of these drugs have been approved by the TGA for this condition, so their use is all "off label". They include opioid drugs such as apomorphine and tramadol, the benzodiazepine drugs such as clonazepam, drugs used to treat Parkinson's disease such as levodopa and ropinirole and even antiepileptic drugs like valproic acid. To my thinking the pharmaceutical approach seems like using a sledgehammer to crack a nut, and the evidence behind the value of many of these treatments is not strong for this disorder.

On the herbal side, herbs for the nervous system which also help improve sleep quality such as Mexican valerian, valerian, kava, skullcap and passionflower all have a role in alleviating the nervous system imbalance which is part of restless legs syndrome. But there is one approach that I have found to work above all others with my patients: treating the circulation.

Circulation: The Neglected Factor in Restless Legs Syndrome

If you think about the many factors associated with restless legs syndrome, such as heavy smoking, pregnancy, obesity, advanced age, diabetes and lack of exercise, they all link to one common factor, which is the circulation. This factor has been recognised in some studies, but seems to be ignored on the treatment side in the rush to prescribe heavy hitting drugs. For example, a study found that restless legs syndrome was very common in people with varicose veins (22% incidence).[v] After treatment for superficial varicose veins (sclerotherapy or vein stripping), 98% reported an immediate improvement in their restless legs. This was just therapy for the superficial veins, whereas the deeper veins carry the bulk of the load of returning the blood from the extremities. When the blood is not circulating properly the walls of the deeper veins can stretch resulting in unpleasant sensations in the legs. The sluggish circulation can cause red blood cell aggregation that can further add to the paraesthesia and restless legs. Flavonoids, which are found in many herbs, but notably in this context *Ginkgo biloba* and horsechestnut, have been found to be beneficial for restless legs.[vi]

There is now "gold standard" clinical evidence for horsechestnut as a therapy for poor venous circulation. The Cochrane Collaboration has recently published its systematic review of the clinical evidence for horsechestnut seed in the treatment of chronic venous insufficiency,[vii] the symptom complex associated with varicose veins and poor return of venous blood. Twenty-nine randomised controlled clinical trials assessing preparations containing horsechestnut seed extract were identified. This included two unpublished trials. Of these, 17 trials met the inclusion criteria. Twelve trials were excluded: 3 were duplicate publications, 7 contained horsechestnut in combination with other active components and 2 did not have appropriate clinical endpoints.

Of the 17 trials included in the systematic review, 10 were placebo-controlled, 2 compared horsechestnut against reference

treatment with compression stockings and placebo, 4 were controlled against reference medication with a flavonoid derivative (beta-hydroxyethylrutoside) and one was controlled against medication with pycnogenol. In all trials the extract was standardised to aescin (also written as escin), which is considered to be the main active constituent of horsechestnut.

Methodological quality was evaluated using the scoring system developed by Jadad.[viii] This scale measures the likelihood of bias inherent in a trial, based on the reporting of randomiszation, blinding and withdrawals. A scale from 1 to 5 is used, where 5 denotes trial reporting suggestive of a relatively high quality with a low risk of bias. Of the 17 trials, 9 scored 4 or 5. The average score on the Jadad scale for all the trials was 3.4.

The majority of the included studies assessed clinical outcomes in terms of leg pain, oedema and pruritis. Other endpoints assessed in the systematic review were leg volume and circumference. For example, leg pain was assessed in 7 placebo-controlled trials. Six studies (543 patients) reported a statistically significant reduction ($p<0.05$) of leg pain on various measurement scales. This is particularly relevant for restless legs syndrome. Similar beneficial results were found for the other clinical parameters.

In terms of adverse events, there was information provided by 14 studies. Four studies reported that there were no treatment-related adverse events for horsechestnut. Gastrointestinal symptoms, dizziness, nausea, headache and pruritis were reported as adverse events in 6 other studies. Another 4 studies reported a good tolerability for the herbal treatment. The reviewers proposed that the results of their systematic review suggest that horsechestnut extract is an effective treatment option for chronic venous insufficiency.

So my key herbs for the management of restless legs syndrome are horsechestnut and butcher's broom for the venous circulation and *Ginkgo biloba* for the arterial and capillary circulation. I typically find that daily doses equivalent to 4.0 to 6.0 g of Ginkgo leaf (80 to 120 mg of standardised 50:1 extract) and 1.6 g of butcher's broom (*Ruscus aculeatus*) root with 2.4 g of horsechestnut seed work well in many patients with this "unknown curse". Since butcher's broom and horsechestnut are rich in saponins that can cause gastro-oesophageal reflux, they are best taken at these doses in an enteric-coated tablet.

References

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