

## **IV iron treatment of RLS with iron deficiency anemia**

Richard Allen, Baltimore, Maryland, USA

**Objectives:** Iron-deficit anemia (IDA) engenders restless legs syndrome (RLS, aka Willis Ekbom disease). Intravenous (IV) iron can rapidly reverse IDA and would be expected to similarly reverse RLS caused by IDA. This is the first consecutive case series evaluating effects of intravenous (IV) iron therapy on RLS occurring with IDA (RLS-IDA)

**Methods:** RLS-IDA patients were evaluated before and 7 – 12 months after a 1000mg IV infusion of low molecular weight iron dextran (INFeD®) using validated questionnaires and standardized telephone interview. Patients were classified as responder versus non-responder for RLS improvement.

**Results:** Follow-up data were obtained on 42 (70%) of 60 consecutive RLS-IDA patients. RLS symptoms were reduced in 76% (32/42) with 47% (20/42) showing an extended response lasting more than 6 months. The response did not relate to age or gender, but tended to be less for African-Americans than Whites (40% (2/5) vs. 81% (30/37),  $p=0.078$ ). White responders vs. non-responders had higher hemoglobin after treatment (12.1 vs. 11.3 g/dL,  $p=0.03$ ).

**Conclusions:** RLS-IDA is reduced after IV iron in most cases, but the 24% failing to respond was higher than expected. The non-responders all showed below normal hemoglobin levels (<12.5 g/dL) suggesting a failure of adequate treatment of the iron deficiency. **Intravenous iron treatment of the RLS with IDA likely requires ensuring more than minimally adequate body iron stores to support iron delivery to the brain. This may require for some a dose higher than the customary 1000 mg IV iron used for treatment of either IDA or RLS alone.**

*(Accepted for publication in Sleep Medicine - )*