ABSTRACT

Background:

End stage renal disease (ESRD) is increasing to epidemic proportions worldwide, at an annual growth rate of 8%. Although ESRD patients represent a small group of the total European countries population (0.02% in the UK, and 0.06% in Italy), cost of care of ESRD absorbs 0.7 to 1.8% of the health service budget. Despite the introduction of the National Health Insurance scheme and the exponential rise in the number of teaching/specialist hospitals nation wide, and more trained nephrologists and hemodialysis facilities, the outcome of ESRD patients is still abysmally poor.

RLS has been shown to be a common disorder with prevalence ranging between 5-15% of the population. The frequency of RLS is higher in ESRD patients than the general population. Previous studies have shown a 12-62% prevalence of RLS in patients with ESRD. There is no published work on the frequency of RLS in African blacks.

Methodology:

This is a cross-sectional descriptive study to investigate the frequency of RLS in a black African population with end stage renal disease. One hundred and one consecutive ESRD patients were recruited; proper case histories and physical examination were conducted. The variables included- hospital number, age, sex, height, weight, body mass index, educational status and blood pressure. Blood samples were collected from the patients for determination of random blood sugar, serum urea, creatinine, serum lipids, calcium, phosphate, albumin and the glomerular filtration rate determined using the Cockcoft-Gault equation. Structured questionnaire based on the IRLSSG diagnostic criteria was administered to all the patients.
RESULTS:

A total of 101 patients with ESRD were recruited and comprised of 54 males and 47 females. Six patients comprising 4 females and 2 males met the minimum criteria for diagnostic of RLS; giving a frequency of 5.9%.

The mean age ± standard deviation of ESRD patients (and those with ESRD plus RLS) were 47.8±15.5yrs (45.17±20.4yrs), mean BMI 24.4±4.6 (25.7±6.9 kg/m²). The mean PCV ±SD was 23.6±7.0 for all ESRD patients without RLS; and 20.8±5.5 for ESRD patients with RLS; while the mean serum calcium ±SD was 7.4±0.3 for ESRD patients without RLS and 6.8 ±2.7 mg/dl, for all patients with RLS.

The mean serum urea ±SD was 173.7±81.9mg/dl for all ESRD patients without RLS and 208.5±73.1mg/dl for the ESRD patients with RLS; while the mean serum albumin (mg/dl) was 3.4±0.7 and 3.1±0.4 for those without and those with RLS. The mean random blood sugar for those without RLS was 98.1±25.9 and 98.8±28.8 for those ESRD with RLS. The mean serum cholesterol and triglycerides were 201.6±74.8 (compared to 223.2±65.9) and 146.9±70.4 (compared to 184.7±74.3) for those with RLS.

Conclusion:

Although RLS is a common disorder in Caucasian ESRD patients, it appears to occur relatively less frequently in Africans with ESRD. The frequency of RLS in ESRD patients in Benin is 5.9%. Haematologic and biochemical parameters including PCV, serum calcium, albumin, blood glucose, urea and creatinine did not significantly differ between ESRD patients with and without RLS. The small number of RLS cases identified could however be responsible for the lack of association.
There were significant differences in serum cholesterol and triglyceride levels in ESRD patients with and without RLS. The significance of this is uncertain. More studies on RLS in ESRD patients in Africa, with larger population size is suggested to properly document the frequency and correlates of this burdensome disorder.