CHRONIC KIDNEY DISEASE ANAEMIA

ASSESSMENT OF LIVER IRON CONTENT BY MAGNETIC RESONANCE IN CHRONIC KIDNEY DISEASE AT THE START OF MAINTENANCE HEMODIALYSIS

Patricia Carrilho¹, Ines Santiago², Pedro Fidalgo¹ and Marta Alves³

¹Hospital Prof Fernando Fonseca, Nephrology, Amadora, PORTUGAL, ²Hospital Prof Fernando Fonseca, Radiology, Amadora, PORTUGAL, ³Centro Hospitalar de Lisboa Central, Epidemiology and Statistics Office of the Research Unit, Lisboa, PORTUGAL

Introduction and Aims: Intravenous iron therapy is increasingly used as part of the treatment of anemia in chronic kidney disease (CKD) and hemodialysis patients. Hepatic iron overload assessed by hepatic magnetic resonance imaging (MRI) has been described in the majority of patients on chronic hemodialysis receiving intravenous iron therapy. Whether iron overload is present at the time of dialysis initiation is unknown. We aimed to describe the liver iron content (LIC) assessed by MRI among a population of incident hemodialysis patients and explore the association with prior intravenous iron therapy.

Methods: A prospective, observational study was conducted at Hospital Fernando Fonseca between March 2014 to November 2015, that included adult patients starting maintenance hemodialysis. Clinical data, including history of previous transfusion, iron and ESA therapy were retrospectively collected. MRI without gadolinium was performed to calculate LIC based on the Gandon’s formula of the Rennes University. Biochemical markers, such as hemoglobin (Hb), ferritin, transferrin saturation (TSAT) were determined at dialysis start.

Results: Of the 17 patients included, 35% of patients had received intravenous iron prior to dialysis initiation (median dose 450mg), and those with history of previous packed red blood cells transfusion (35%) had received a median dose of 2.5 packs. 65% of patients were under ESA at the time of dialysis start. Evaluation of LIC by MRI showed mild overload (51-100 µmol/g) in 59% and moderate overload in 23% of patients already at the start of hemodialysis. Only 18% had normal LIC (≤50µmol/g).

Conclusions: These findings suggest that iron administration to CKD patients should be cautious since the majority of patients already have hepatic iron overload at the time of dialysis start.

© The Author 2016. Published by Oxford University Press on behalf of ERA-EDTA. All rights reserved.