

3rd International Conference on Nephrology & Therapeutics

June 26-27, 2014 Valencia Conference Centre, Valencia, Spain

6-hour Hemodialysis without a significant increase in dialysis dose, as judged by Kt/V, can reduce the dose of EPO in HD patients with diabetes

Atsuhiro Maeda

Kouzenkai-Maeda Hospital, Japan

Introduction and Aims: Inadequate dialysis is known to be a risk factor for resistance to erythropoietin (EPO) therapy. High doses of EPO increase the risk of death and cardiovascular outcomes in hemodialysis (HD) patients. This study aimed to explore the relationship between EPO dosage and dialysis time in HD patients.

Methods: A cross-sectional analysis of the relationship between EPO dosage and dialysis time in HD patients with diabetes was explored. A total of 78 HD patients with diabetes who were receiving maintenance HD at four outpatient HD facilities in Japan were included. They were classified in two groups. Group 1 was made up of 4 hour-HD (n=40) patients who started HD between 1991 and 2011. Group 2 was made up of 6 hour-HD (n=38) patients who started HD between 1994 and 2011. We studied the parameters of hemoglobin (Hb), ferritin, albumin (Alb), C-reactive protein (CRP), intact parathyroid hormone (i-PTH), the standardized HD dose of urea (Kt/V) and EPO requirement. These parameters were analysed using the statistical software, JMP6TM (SAS Institute).

Results: The mean age of 78 patients was 66.3±10.6 years, the mean Hb was 11.0±1.0 g/dl, the mean Alb was 3.7±0.4 g/dl, the mean CRP was 0.4±0.6 mg/dl, the mean i-PTH was 125.3±115.8 pg/ml and the mean Kt/V was 1.5±0.2. There were no significant differences between the two groups. EPO requirement was significantly higher in group1 than in group2 (5375.0±461.6 versus 3111.8±473.6 IU/week, P<0.05). Multiple regression analysis revealed that there was a statistically significant relationship between the dialysis time and the EPO requirement ($r^2=0.24$, P=0.002).

Conclusions: 6 hours dialysis in HD patients with diabetes can reduce the dose of EPO. Shortening the session time without decreasing significantly the dialysis dose, as judged by Kt/V, was therefore associated with impaired EPO responsiveness.

Biography

Atsuhiro Maeda passed the national examination for medical practitioners in 2000 at the age of 25 years from Fukuoka University. He has published 7 papers in reputed journals. His speciality is hemodialysis, continuous ambulatory peritoneal dialysis, renal transplantation, treatment of chronic kidney disease and acute kidney injury.

maedaatsuhiro@mopera.net