

16th EUROPEAN NEPHROLOGY CONFERENCE

October 02-03, 2017 Barcelona, Spain

Uncontrolled hypertension is the most common trigger factor of posterior reversible encephalopathy syndrome in patients with chronic kidney disease

Moon-Jae Kim, Boram Cha, Sun Duk Hwang, Joon Ho Song and Seung Woo Lee
Inha University Hospital Kidney Center, Korea

Objective: Abdominal aortic calcification (AAC) is a risk factor of mortality and is associated with the progression of AAC in end-stage renal disease patients on maintenance hemodialysis. However, no cutoff value has been determined for the prediction of mortality and the optimum values of serum calcium and phosphate concentrations for the prevention of AAC progression have been still controversial.

Design & Methods: The medical records of 112 patients on hemodialysis who had undergone simple lateral lumbar radiography every 6 months from November 2011 were reviewed. Degrees of aortic calcification were evaluated using the scoring system devised by Kauppila et al. Patients were followed until November, 2014 and the relationship between the degree of AAC and mortality was evaluated. Also, the relationships between the progression of AAC and serum concentrations of calcium and phosphate were evaluated.

Results: The mean AAC score at baseline was 5.5±4.8 and the cutoff calcification score for prediction of mortality was 7.75 (sensitivity 61%, specificity 81%). Patients were allocated to group A (baseline total calcification score under 8.0, n 85) or group B (baseline total calcification score over 8.0, n 27). 75 patients completed the follow-up period, and of these, 51 showed a progression in calcification scores (group 1) and 24 showed no change or improvement (group 2). Furthermore, repeated measures analysis of variance showed higher monthly corrected calcium concentrations (P, 0.099) and mean corrected calcium levels during the 1st year, 2nd year, and 3rd year of follow-up (P, 0.062) in Group 1, but without statistical significance. The cutoff values of mean corrected calcium of the 2nd year and 3rd year for the prediction of AAC progression during follow-up years were 8.96 mg/dL and 9.45 mg/dL, respectively.

Conclusions: Patients with an AAC score of 48 at baseline seem to be at higher risk of mortality during follow-up. Of the serum variables examined, such as corrected calcium, phosphate, and corrected calcium phosphate, corrected calcium was found to be marginally associated with AAC progression. However, a larger-scale prospective study is required to confirm our findings.

nhkimj@inha.ac.kr