

Commentary

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Hyperhomocysteinemia in Children Undergoing Dialysis

Nasrin Esfandiar

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Pediatric Nephrology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

See article titled: Mild Hyperhomocysteinemia in Children and Young Adults on Dialysis: A Single Center Study

***Corresponding Author**

Nasrin Esfandiar, MD.

Associated Professor of Pediatric Nephrology
Mofid Children's Hospital, Shariati Ave, Tehran, Iran.
Email: nasrinesfandiar@gmail.com

Cardiovascular disease (CVD) is the leading cause of mortality in 23-45 percent of adults and pediatric patients with end stage renal diseases (ESRD) [1,2]. Researchers have determined that hazard ratio for CVD increases to more than three times when GFR reaches less than 15 ml/min/1.73m [2,3]. Homocystein (Hcy) is a sulfur-containing amino acid and it is shown that its raising level is associated with higher cardiovascular mortality and morbidity [4-7]. The role of hyperhomocysteinemia as a risk factor for CVD in adults with ESRD is known [8-10]. Homocystein level is usually lowered by some substances like vitamin B derivatives [11]. Some researchers have evaluated effect of high doses folic acid, folinic acid, omega-3, vitamin B6, and vitamin B12 supplements on lowering HCY level and CVD risk [12-15]. The majority of these articles are related to adults and there are limited studies in pediatric group in this regard [16,17]. In this issue of the journal, Naseri et al evaluated Hcy level in children with ESRD and determined that 56.2 % had hyperhomocysteinemia including 41.6% of CAPD and 2/3 of hemodialysis patients with no

significant difference based on age, gender, duration and modality of dialysis, and dosage of folate supplement. Although limitation of this study was lack of control group, using adult reference value for Hcy concentration in children, 29 percent of 45 dialysis children had hyperhomocysteinemia that was similar to adults, and according to logistic regression analysis, gender of patients or modality of dialysis there were not a risk factor for its development.

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