Re: Relationship Between Serum Intact Parathyroid Hormone and Pruritus in Hemodialysis Patients

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Dear Editor,

With great interest, we recently read the article by Makhlough and collegues[1] titled "Relationship Between Serum Intact Parathyroid Hormone and Pruritus in Hemodialysis Patients" published in your most valuable journal. This study focused its massage on sociodemographic and laboratory factors affecting on pruritus in hemodialysis patients. It is of interest that the authors concluded high levels of intact parathyroid hormone (PTH) correlated with the severity of pruritus in hemodialysis patients. Akhyani and colleagues showed there was no significant relationship between pruritus and serum level of PTH in hemodialysis patients.[2] In addition, another study found that PTH injection in to the skin did not lead to pruritus, so PTH itself was not pruritugenic.[3] It is also important to note that pruritus was not a common symptom in patients with primary hyperparathyroidism[4]; on the other hand, all patients with secondary hyperparathyroidism did not have pruritus and often itching persisted after low postoperative PTH level.[5] Thus, the role of PTH on pruritus has remained a challenge, yet. It seems some factors such as anemia of chronic disease, iron deficiency anemia, hepatitis, and hypothyroidism can affect pruritus on hemodialysis individuals.[6]

Although there was no relationship between age and pruritus in the current study,[1] some studies showed a significant difference on pruritus with advancing age. Mirnezami and colleagues detected patients older than 70 years had more severe pruritus when compared to younger patients.[7] Moreover, other research on PTH level showed that despite high level of PTH in younger patients, pruritus was not common in them.

There is a conflict of gender effect on pruritus in hemodialysis patients between research findings. Some articles such as the current article[1] showed gender did not have any correlation with pruritus, while other studies[8,9] found males on hemodialysis were more likely to have pruritus. In addition, a recent large study on 1037 patients with chronic pruritus showed psychosomatic differences between two genders led to significantly differences in pruritus between them.[10] Therefore, men more frequently had pruritus on noninflamed skin when compared to women. It seems it needs a meta-analysis to evaluate gender role on pruritus in hemodialysis patients.

Finally, it seems there is a challenge on role of PTH on pruritus and it needs a large sample study or a meta-analysis evaluating all confounder factors to find whether PTH has a role on pruritus.

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Re: NPHS2 Gene in Steroid-resistant Nephrotic Syndrome: Prevalence, Clinical Course, and Mutational Spectrum in South-West Iranian Children

Dear Editor,

The optimal treatment of a disease requires the knowledge of the etiology of the disease. However, in real life, this is largely elusive in the majority of diseases affecting the humans. The situation with regard to nephrotic syndrome (NS) in children is also no exception. The vast majority of cases of NS belong to the idiopathic category. Traditionally, immune pathogenesis has been thought to play the predominant role in the pathogenesis of the disorder.[1] This is the basis for the use of steroids and immunosuppressive drugs for the empirical treatment of this condition. Since steroids form the mainstay of treatment of idiopathic NS in children, the disease is often classified on the basis of response to this treatment into steroid sensitive (SSNS) and steroid resistant (SRNS) types. Among these, the later poses significant therapeutic challenges to the pediatric nephrologists.[2] Hence, much attention has been focused toward elucidating the causes and pathogenesis of this subset of idiopathic NS.[3] More recently, the attention has been directed toward identifying the genetic causes of idiopathic NS. Many studies have been conducted throughout the world on identifying the genetic mutations in a number of podocyte genes. There is a wide discrepancy in the reported results in these studies.[4,5] There are multiple reasons for the heterogeneous results in these studies, such as methodological differences, differences in enrolled cohorts, different definitions of SRNS, number of genes tested and so on. These factors may contribute to the real genetic differences in the different ethnic populations and geographic locations.

Basiratnia and colleagues[3] have analyzed the frequency of disease-causing mutations in *NPHS2* gene in 49 Iranian children with SRNS from the southwest Iran region. These authors have done a commendable job in describing the spectrum of genetic abnormalities in *NPHS2* gene in this condition in Iran. They found a high prevalence of *NPHS2* mutations (30.6%) in the studied cohort whose mean age was 6.8 years, although only one gene was analyzed in their study. The majority of these cases (n = 42) were sporadic, only 7 cases were familial in nature. The prevalence of mutations was very high in familial cases (57%) compared with the sporadic cases (26%). The observed histopathological lesions among the biopsied children in both mutation positive and mutation negative cases attest to the infidelity of the histological findings with regard to the etiology of the disease. Other clinicopathological parameters were also not help in differentiating mutation positive from mutation negative cases. The clinical response to pharmacotherapy was poor in the mutation positive cases. The results by Basiratnia and colleagues[3] more closely resemble the figures by European studies than studies from other parts of Asia.[4-6] Two recent studies from neighboring countries of Pakistan and Saudi Arabia found a markedly low rate of frequency, even while testing for three genes in each.[5,6] The reasons for these marked differences are not readily apparent, as almost similar methodology has been applied in these studies, ie, of direct gene sequencing. It seems that one important factor is the variation in the number of familial cases included in the study. True ethnic differences may also be at play