Dosing of steroids in small children with nephrotic syndrome

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Sir,

We read with great interest the letter sent to your journal by Hirano and Fujinaga [1] in which they describe a retrospective review of children with idiopathic nephrotic syndrome (NS) weighing 30 kg or less at their institution. Based on their results, they concluded that the onset time for relapses after initial therapy was significantly shorter for children in the body weight (BW)-based dosing group than those in the body surface area (BSA)-based group. They also found that the proportion of steroid-dependent NS was significantly higher among children in the BW-based dosing group than among those in the BSA-based group. As acknowledged by these authors, their study findings are limited by the retrospective nature of the study design as well as the small number of patients in each group.

The findings of Hirano et al., similar to those which we previously published in *Pediatric Nephrology* [2], indicate that BW-based dosing and BSA-dosing of steroids are not equivalent when treating patients with idiopathic NS weighing <30 kg. Our study showed that BW-dosing of steroids resulted in an underdosing effect that correlated with an increased likelihood of a frequently relapsing course, but it was also limited by its retrospective nature and the small number of patients.

It should be noted that the observation of the effect of the initial dose of steroids on the subsequent outcome of

patients with NS is not new. Multiple studies [3] have demonstrated that a longer treatment course and higher cumulative steroid dose at the outset of disease treatment can reduce the risk of frequent relapses, the need for repeated corticosteroid courses, and the need for additional cytotoxic medications. However, these studies had different methods for prescribing steroids.

These latest observations by Hirano and Fujinaga [1] further support the need to better understand the effect of different dosing regimens on the initial and subsequent outcome of nephrotic syndrome—questions which will be better answered by larger, randomized prospective trials.

References

1. Hirano D, Fujinaga S (2013) Two dosing regimens for steroid therapy in nephrotic syndrome. *Pediatr Nephrol*. doi:10.1007/s00467-013-2417-8
2. Saadeh SA, Baracco R, Jain A, Kapur G, Mattoo TK, Valentini RP (2011) Weight or body surface area dosing of steroids in nephrotic syndrome: is there an outcome difference? *Pediatr Nephrol* 26:2167–2171
3. Hodson EM, Willis NS, Craig JC (2007) Corticosteroid therapy for nephrotic syndrome in children. *Cochrane Database Syst Rev*: CD001533

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