

# Obesity and other clinical endpoints in steroid-sensitive nephrotic syndrome

Thomas J. Neuhaus · Eva-Maria Rüth ·  
Markus Kemper

Received: 21 August 2006 / Accepted: 2 September 2006 / Published online: 7 December 2006  
© IPNA 2006

Sirs,

We read with great interest the article of Foster et al. [1] on risk factors for glucocorticoid-induced obesity in children with steroid-sensitive nephrotic syndrome (SSNS). The prevalence of obesity in patients with remote SSNS was high with 20%, however, not significantly different from the prevalence in the reference group. We have recently reported a comprehensive long-term study on 42 adults treated for childhood SSNS, providing also a detailed analysis of growth [2]. The median BMI was 23 kg/m<sup>2</sup>; in five women and three men the BMI was >25, and only one female was obese, with a BMI of 31.4. No correlation was found between height and weight in adulthood and the cumulative prednisone dose or duration of prednisone administration. The epidemic of being overweight and obese appears to be more prevalent in the US than in some European countries. We suggest to add to the conclusion of

Foster's report that the prevalence of persistent obesity in children with SSNS is also correlated with the local prevalence or epidemic of obesity in the healthy reference group.

Also, other clinical endpoints seem to differ in various geographical areas. Hegarty et al. [3] reported a high prevalence of bone fractures in adults treated with steroids for childhood SSNS in the UK: Of the 24 male and 10 female subjects, 19 (79.2%) and 3 (30%), respectively, had suffered a total of 43 self-reported fractures. In contrast, only 2 (5%) of the 42 patients in our study had sustained a single bone fracture although our patients were not given calcium or vitamin D supplements.

We propose that the long-term outcome and clinical endpoints in steroid-sensitive idiopathic nephrotic syndrome not only depend on treatment regimens and therapy responsiveness, but also on regional circumstances, lifestyles and living conditions.

---

T. J. Neuhaus (✉)  
Leiter Nephrologie/Poliklinik, Universitäts-Kinderklinik,  
Steinwiesstrasse 75,  
Zürich 8032, Switzerland  
e-mail: Thomas.Neuhaus@kispi.unizh.ch

E.-M. Rüth  
Pediatric Nephrology, University Children's Hospital,  
Zürich, Switzerland

M. Kemper  
Nephrology, University Children's Hospital,  
Hamburg, Germany

## References

1. Foster BJ, Shults J, Zemel BS, Leonard MB (2006) Risk factors for glucocorticoid-induced obesity in children with steroid-sensitive nephrotic syndrome. *Pediatr Nephrol* 21:973–980
2. Rüth E-M, Kemper MJ, Leumann EP, Laube GF, Neuhaus TJ (2005) Children with steroid-sensitive nephrotic syndrome come of age: long-term outcome. *J Pediatr* 147:202–207
3. Hegarty J, Mughal MZ, Adams J, Webb NJA (2005) Reduced bone mineral density in adults treated with high-dose corticosteroids for childhood nephrotic syndrome. *Kidney Int* 68:2304–2309