

ORAL PRESENTATION

Open Access

Nutritional status in idiopathic scoliosis

J Durmala^{1*}, M Sosnowska², M Sosnowski²

From 8th International Conference on Conservative Management of Spinal Deformities and SOSORT 2011 Annual Meeting
Barcelona, Spain. 19-21 May 2011

Background

A relatively high proportion of lean body habitus is an acknowledged feature of idiopathic scoliosis [1]. We aimed at evaluation of nutritional status in schoolchildren with idiopathic scoliosis managed in a single center of rehabilitation. Data from a homogeneous population regarding current national BMI reference is presented.

Materials and methods

303 children were included. There were 260 girls and 43 boys, aged 14.2 ± 0.2 and 14.1 ± 0.4 years, resp. In each girl or boy, the body height and mass was measured by using the standardized protocol. Individual BMI (kg/m^2) was classified according to the established normal age- and gender-related range (Z-score) of limit for Polish children. The calculations were performed on basis of actually measured height (BMI), as well as after height correction (BMI_{cor}). Data were compared with the BMI distribution in healthy children.

Results

The BMI values lower than 2SD Z-score and 1SD Z-score were found in 3.3% and 17.8%. The BMI values higher than 2SD and 1SD were found in 0.3% and 7.9%, resp. After correction for height, the proportions for low BMI_{cor} were 5.0% and 24.0%. There was none case of obesity after height-correction, and the proportion of overweight children reached 6.0%. Compared to BMI in normal population, the frequency of low BMI or BMI_{cor} in IS was found 3.05- or 4.2-times higher, resp. On contrary, the frequency of high BMI or BMI_{cor} was 2.0 or 2.7-times lower, resp.

Conclusions

Almost one-third of children with IS are underweight, while obesity is a sporadic feature. Reasons of low nutritional status should be explained in each case.

¹School of Health Care Katowice, Poland
Full list of author information is available at the end of the article

Author details

¹School of Health Care Katowice, Poland. ²School of Medicine, Medical University of Silesia, Katowice, Poland.

Published: 27 January 2012

Reference

1. Burwell RG, Aujla RK, Grevitt MP, Dangerfield PH, Moulton A, Randell TL, Anderson SI: Pathogenesis of adolescent idiopathic scoliosis in girls—a double neuro-osseous theory involving disharmony between two nervous systems, somatic and autonomic expressed in the spine and trunk: possible dependency on sympathetic nervous system and hormones with implications for medical therapy. *Scoliosis* 2009, **4**:24.

doi:10.1186/1748-7161-7-S1-O22

Cite this article as: Durmala et al.: Nutritional status in idiopathic scoliosis. *Scoliosis* 2012 **7**(Suppl 1):O22.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit

