

Comment

The current issue of "Progress in Medicine" is addressed to pediatricians as well as specialists in children's endocrinology and diabetes. The issue comprises several original and casuistic works which discuss complicated diagnostic and therapeutic problems.

Diagnosis and treatment of children's endocrine disorders resulting from hormone hypersecretion or hyposecretion require not only excellent knowledge of symptoms and treatment strategies but also experience-based knowledge of child physiology and regulations of the endocrine system at each stage of child development. The widening scope of genetic testing facilitates prompt identification of those patients who may present hormonal disorders already in childhood. However, hormonal intervention in children may result in a variety of complications both in childhood and adult life.

Hopefully, the current issue of "Progress in Medicine" which we are now offering our Readers will be of interest not only to pediatricians but also to general practitioners and endocrinologists dedicated to the health care of young patients on threshold of adult life.

First comes the work of Rumińska et al. "Relationship between adiponectin levels and metabolic syndrome components in obese children and adolescents" in which the role of adiponectin in the development of metabolic syndrome in obese children is discussed at length. Adiponectin belongs to a group of adipokines with protective and anti-atherogenic properties. As demonstrated in the study of 122 patients of the Clinical Department of Endocrinology and Pediatrics a 1 unit increase in adiponectin level results in a 0.9 fold reduction of the risk of a low < 40 mg/dl HDL-C level which is lower for most obese children. The results confirm the significant consequences of childhood obesity for development of the metabolic syndrome.

The aim of the next study by Rogozińska et al. "Factors contributing to the development of diseases of the oral mucosa and gums in children with type 1 diabetes" was analysis of the effect of chronic disease of several-month/year duration on oral mucosa and gums. It has been demonstrated that in diabetic children hyperglycemia favours oral mucosa diseases and fungal *Candida* spp. infections which need to be considered as possible complications.

"The use of fine needle aspiration biopsy in the diagnosis of thyroid nodules" is a study by Grajewska et al. which presents research material of 37 patients aged 7-18 years qualified for biopsy because of superficial palpable lesions in thyroid nodules. The microscopical changes were described according the cytological picture and graded by recommended diagnostic categories using Bethesda System. The results are presented in a special table. The study confirmed that this technique provides a differential diagnosis between benign and malignant changes enabling appropriate therapeutic management and the determination of the correct surgical procedure when surgery is required.

The next two works refer to children with growth hormone deficiency.

The study by Majcher et al. "Effect of nutritional status on growth velocity in the first year of growth hormone treatment of children with Growth Hormone Deficiency" is an evaluation of the state of nutrition before introduction of growth hormone therapy and during treatment. The authors demonstrated the importance of proper nutrition of children – malnutrition decreases the effect of growth hormone treatment. Nutritional disorders in children with Growth Hormone Deficiency (GHD) require intervention of specialists.

The study by doctor Witkowska-Sędek et al. "ALP, b-ALP, PICP and ICTP in children with growth hormone deficiency during the first year of growth hormone treatment" focuses on the measurement of biochemical markers of bone turnover and bone resorption in children on growth hormone therapy. It has been demonstrated that the concentrations of all the measured markers of bone formation increased significantly at 3 months of treatment. The concentration of the bone resorption marker changed significantly at 6 months of treatment. A correlation between serum concentrations of ALP, PICP, ICTP and growth rate in the first year of growth hormone treatment was determined. After the start of growth hormone therapy bone metabolism accelerates significantly and a new balance between the processes of bone formation and bone resorption is established. Changes in levels of bone turnover markers correlate with growth rate in the first year of growth hormone treatment. It is an easily accessible method of non-invasive evaluation of bone turnover. In pediatric endocrinology, bone formation and bone resorption markers are useful in predicting the effects of growth hormone therapy. The study demonstrates a significant acceleration of bone metabolism and establishment of new equilibrium between bone turnover and bone resorption in a group of children with growth hormone deficiency.

A series of papers devoted to child obesity opens with a preliminary study "Assessment of vitamin D supplementation in the Warsaw's children after infancy" conducted by the members of Student's Scientific Group headed by Kucharska (Department of Pediatrics and Endocrinology of Medical University of Warsaw). A retrospective analysis of 257 patients with determined serum 25-hydroxyvitamin D (25(OH)D) levels demonstrated that only

21.40% of children reached the > 30 ng/ml level which is optimal for 25(OH)D. 25(OH)D levels were demonstrated to be significantly lower for children during puberty and in obese children than for children at pre-puberty age.

The study report of Krajewska et al. "Plasma vitamin D levels in obese children: relationship with selected anthropometric and metabolic parameters" comprised a group of 65 obese patients and confirmed the negative effect of vitamin D insufficiency not only on body fat mass but also on insulin resistance measured with HOMA-IR index (homeostasis model assessment-insulin resistance).

Next comes the study of Czerwonogrodzka-Senczyna et al. on "Immunomodulators and immunostimulants in the diet of children and teenagers suffering from simple obesity". The study participants were interviewed on the products and meals consumed. It was demonstrated that their diet was not properly balanced for macrocomponents and immunomodulators which may be the reason of immunological disorders and immunodeficiency in this group of patients.

The last work on the obesity of children is the study by Domosławska – a physiotherapist who measured the level of self-esteem and life satisfaction in overweight and obese adolescents and found that it is lower for than for normal-weight adolescents. This will undoubtedly affect the way overweight and obese adolescents will function in the future. The study shows that overweight and obesity has impact on the level of self-esteem and life satisfaction. Excess body weight is not only a physical but also a mental problem.

The issue closes with two casuistic works. One is "Diabetic ketoacidosis in children – report of three cases" described by Miszkurka et al. who discusses problems related to therapy of patients with severe diabetic ketoacidosis (DKA) in the first day of hospitalization. The paper includes detailed recommendations and the author's own experience regarding safe management of such patients. The second work is "Thrombocytopenia in the course of thyrotoxicosis in 16 year-old girl" by Artemniak-Wojtowicz et al. who presents a rare case of thrombocytopenia which presented as the first symptom of hyperthyroidism. The case confirms the role of the thyroid hormones in maintaining the balance of the hematopoietic system. It also indicates that normalization of thyroid hormones has a significant influence on positive therapy effects in patients with thrombocytopenia.

It is my sincere hope that the current issue of "Progress in Medicine" will provide the Reader with a purposeful and challenging lecture.

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