



# 60th Annual Meeting of the European Society for Paediatric Endocrinology (ESPE)

Rome, Italy, September 15–17, 2022

## Abstracts

Editor

*Stefano Cianfarani, Rome, Italy*

Programme Organising Committee

Nils Krone, UK, *Chair*

Stefano Cianfarani, Italy, *President 2022*

Mariacarina Salerno, Italy, *Vice President 2022*

Paul van Trotsenburg, The Netherlands, *President Elect 2023*

Evangelia Charmandari, Greece, *CPC Chair*

Mehul Dattani, UK

Sasha Howard, UK

Philippe Lysy, Belgium

Ola Nilsson, Sweden

Malgorzata Wasniewska, Italy

Ram Weiss, Israel

Local Organising Committee

Stefano Cianfarani, *President*

Mariacarina Salerno, *Vice President*

Carla Bizzarri

Marco Cappa

Manuela Caruso Nicoletti

Alessandra Cassio

Graziano Cesaretti

Valentino Cherubini

Franco Chiarelli

Luisa de Sanctis

Maria Felicia Faienza

Lucia Ghizzoni

Laura Guazzarotti

Lorenzo Iughetti

Sandro Loche

Claudio Maffei

Mohamad Maghnie

Emanuele Miraglia Del Giudice

Maria E. Street

Sonia Toni

Malgorzata Wasniewska

Giovanna Weber

P1-481

### Non-traditional cardiometabolic risk factors in obese children and adolescents with Metabolic Syndrome

Athanasia Tragomalous<sup>1,2</sup>, George Paltoglou<sup>1,2</sup>, Ourania Tsimiloni<sup>3</sup>, Sofia Loukopoulou<sup>4</sup>, Maria Binou<sup>1</sup>, Eleni Ramouzi<sup>1</sup>, Penio Kassari<sup>1,2</sup>, Evangelia Charmandari<sup>1,2</sup>

<sup>1</sup>Outpatient Clinic for the Prevention and Management of Overweight and Obesity, Division of Endocrinology, Metabolism and Diabetes, First Department of Pediatrics, 'Aghia Sophia' Children's Hospital, Athens, Greece. <sup>2</sup>Division of Endocrinology and Metabolism, Center of Clinical, Experimental Surgery and Translational Research, Biomedical Research Foundation of the Academy of Athens, Athens, Greece. <sup>3</sup>Department of Biology, Section of Animal and Human Physiology, University of Athens, Athens, Greece. <sup>4</sup>Department of Pediatric Cardiology, 'Aghia Sophia' Children's Hospital, Athens, Greece

**Background:** The prevalence of obesity in childhood has increased dramatically during the last decades. Dyslipidemia, hypertension and insulin resistance – all components of the metabolic syndrome (MS) and well-known cardiometabolic risk factors – predispose to the development of inflammation and premature atherosclerotic cardiovascular disease in childhood.

**Aim:** To determine “non-traditional” cardiometabolic risk factors in obese children and adolescents with and without MS, before and after the implementation of a comprehensive, multidisciplinary, personalized life-style intervention program for 1 year.

**Methods:** One hundred and forty-nine (n=149) children and adolescents [91 males (61.07%), 58 females (38.93%), 32 prepubertal (21.48%), 117 pubertal (78.52%)] attending our 'Out-patient Clinic for the Prevention and Management of Overweight and Obesity in Childhood and Adolescence' were studied prospectively. Subjects were classified as having MS (n=90; mean age±SE:13.19±0.2 years) or not (n= 59; mean age± SE: 12.05±0.28 years) according to the International Diabetes Federation criteria for MS. All participants underwent clinical examination, echocardiography, ultrasound of the carotid arteries to determine carotid intima-media thickness and blood sampling for biochemical, endocrinologic and “non-traditional” cardiometabolic risk factors (adiponectin, homocysteine, hs-CRP, leptin, IL-2, IL-4, IL-10, IL-17A, TNF, IFN-γ) at the beginning of the study and following 1-year of a personalized life-style intervention program.

**Results:** Systolic (SBP) and diastolic (DBP) blood pressure were significantly higher in children with MS (127.04±1.28 and 74.91±1.02mmHg, respectively) than those without MS (114.3±1.09 and 68.35±1.13mmHg, p<0.05) and improved significantly in children with MS after 12 months' intervention. Interventricular septal end systole (IVSs) was significantly higher in the MS group than the control group both at baseline (9.67±0.30 vs. 8.47±0.25mm, p<0.05) and after intervention (9.63±0.28 vs. 8.58±0.24mm, p<0.05). Mean Right Common Carotid Artery (RCCA) was significantly higher in the MS group than the control group at baseline (0.65±0.02 vs. 0.50±0.02mm, p<0.05), and decreased significantly in the MS group after 12 months' of intervention. Mean Left Common Carotid Artery (LCCA) did not differ significantly among groups. The proinflammatory cytokines IL-2, IL-6, TNF, IL-17A, IFN-γ were significantly higher at baseline in the MS

group than the control group. Triglyceride concentrations at initial assessment were the best positive predictor of mean LCCA (β:0.37), while SBP followed by triglyceride concentrations at initial assessment were the best positive predictor of mean RCCA (β:0.25 and β:0.22, respectively).

**Conclusion:** Our findings indicate increased cardiometabolic risk in children with MS, as well as an improvement in cardiovascular parameters and cytokines following intervention.

P1-482

### Liraglutide SC in the treatment of severe obesity in Pediatrics: a missed therapeutic opportunity?

Ignacio Diez-Lopez<sup>1,2</sup>, Ainhoa Sarasua-Miranda<sup>1</sup>, Mari Jose Espina-Diez<sup>1</sup>

<sup>1</sup>OSI Araba.Paediatric Service, Vitoria, Spain. <sup>2</sup>Pediatric Department, Basque Country University, UPV-EHU, Vitoria, Spain

Liraglutide 3.0 mg has been shown to improve body mass index (BMI) and weight in obese adolescents. And it has done so in a randomized, double-blind, phase 3 clinical trial that has investigated the effect of liraglutide 3mg. compared with placebo for weight control in 251 obese minors, and as a complement to a healthy lifestyle. Adverse events associated with the use of liraglutide 3.0 in pediatric patients are not very different from those observed in adults. There may be cases of gastrointestinal discomfort such as a feeling of excessive gastric fullness, nausea on occasion and, more rarely, vomiting, all especially during the first weeks of administration.

Liraglutide 3.0 mg, although it requires a prescription for sale, is not funded by the SPS. Cost of a box of 5 pens is €283.05

The progressive increase in the prevalence of overweight and obesity in this age group. At Spain it can reach up to 40%. These have led to the appearance of new family models, eating habits and life models that facilitate the development of obesity in new generations. There are social and ethnic groups where the prevalence of childhood obesity is more prevalent.

**Objective:** To evaluate the clinical experience in the incorporation of SAXENDA in routine clinical practice.

**Methods:** severely obese patients over 12 years of age who are likely to use liraglutide under the indication of the technical data sheet. Presentation of the product and offer to the family. Socio-economic study in direct interview, sex, age. Collection of impressions, in case of refusal the cause.

**Results:** 45 children older than 12 years (15♂), mean age 13.5 to [12-16]. Mean follow-up time in SCC of 3.5 years [2.8-5.2]. HbA1c (DCA): 5.7% [5-6.2], no DM 2, mean BMI 35.28 kg/m<sup>2</sup> [29,42].

Ethnic origin 90% foreigners. Socioeconomic level manifested low (20/45), medium-low (12/45), medium (12/45), high (1/45), very high (0/45).

Rejection 40/45, value next visit 4/45, acceptance 1/45

Reasons for rejection: fear of needles 25/40, price 30/40, distrust 3/40, others 2/40.

**Conclusion:** We assume that this study may present some deficiencies due to the size of the sample, but our study demonstrates