



**Poster 25. DIETARY TREATMENT IN PHENYLKETONURIA DOES NOT LEAD TO INCREASED RISK OF OBESITY OR METABOLIC SYNDROME**

**Autores:** *Júlio César Rocha*<sup>1,2</sup>, *Françjan van Spronsen*<sup>3</sup>, *Manuela Ferreira de Almeida*<sup>1</sup>, *Gabriela Soares*<sup>1</sup>, *Dulce Quelhas*<sup>1</sup>, *Elisabete Ramos*<sup>4,5</sup>, *João Tiago Guimarães*<sup>2,5,6</sup>, *Nuno Borges*<sup>7</sup>

**Afilições:** <sup>1</sup>Centro de Genética Médica Doutor Jacinto de Magalhães (CGMJM), Centro Hospitalar do Porto (CHP), Porto Portugal; <sup>2</sup>Departamento de Bioquímica (U38-FCT), Faculdade de Medicina, Universidade do Porto (FMUP), Porto, Portugal; <sup>3</sup>Beatrix Children's Hospital, University Medical Centre of Groningen, University of Groningen, Groningen, The Netherlands; <sup>4</sup>Departamento de Epidemiologia, Saúde Pública e Medicina Preventiva, Faculdade de Medicina, Universidade do Porto (FMUP), Porto, Portugal; <sup>5</sup>Instituto de Saúde Pública, Universidade do Porto (ISPUP), Porto, Portugal; <sup>6</sup>Departamento de Patologia Clínica, Centro Hospitalar de São João (CHSJ), Porto, Portugal; <sup>7</sup>Faculdade de Ciências da Nutrição e Alimentação, Universidade do Porto (FCNAUP), Portugal.

**Contatos:** Júlio César Rocha, Nutricionista, CP 0438N, UGM, CGMJM, CHP; Telefone: +351 22 6070339; Fax: +351 22 6070399; E-mail: [julio.rocha@insa.min-saude.pt](mailto:julio.rocha@insa.min-saude.pt); [rochajc77@gmail.com](mailto:rochajc77@gmail.com)

**INTRODUCTION:** Little is known about the consequences of the carbohydrate enriched diet used to treat patients with Phenylketonuria (PKU) in terms of obesity and metabolic syndrome (MetSyn) development.

**OBJECTIVES:** Our study aimed to investigate the prevalence of overweight and obesity, and its consequences in terms of body composition and MetSyn in early treated patients with PKU compared to controls.

**MATERIAL AND METHODS:** A sample of 89 patients with PKU (3-30y; 14.4±6.6y) and 79 controls (3-47y; 16.3±7.9y) were studied. In the fasted state, anthropometric, body composition, blood pressure and analytical parameters [amino acids, glucose, insulin, total and HDL-cholesterol (HDL-c), triglycerides (TG), high sensitivity c-reactive protein and uric acid] were performed. Data on dietary intake was collected. Body mass index was classified using WHO criteria, while the definition from International Diabetes Federation (IDF) was used for MetSyn.

**RESULTS:** Prevalence of overweight and obesity (32.6% vs. 24.1%; p=0.293), body fat percentage (22% vs. 23.1%, p=0.581) and central obesity (36.9% vs. 36.4%, p=0.999) were comparable to controls. Patients revealed a higher TG/HDL-c (p<0.001). The prevalence of MetSyn was 1.5% and 6.1% in patients and controls, respectively.

**CONCLUSIONS:** Patients and controls were similar in terms of overweight and obesity, body composition and MetSyn. However, the dyslipidemia in patients with PKU in relation to overweight and obesity may help us trying to understand the course and the etiology of MetSyn not only in PKU but also in the general population.