Results: Of the 232 subjects evaluated, 40.1% were classified as MHO (n = 93) and 59.9% as MHUO (n = 139). Age (years), weight (Kg), BMI and WC (cm) mean (± standard deviation) values were 39.6 ± 11.1/43.6 ± 10.1, 117.5 ± 17.1/117.8 ± 20.0, 42.9 ± 4.5/42.4 ± 4.9 and 118.0 ± 11.9/120.7 ± 14.2 for the MHO and MHUO groups, respectively. Accordingly, in these groups, circulating uric acid concentrations (mg/dL) were 5.0 ± 1.1 and 5.4 ± 1.4 (p = 0.033), respectively. Hyperuricemia was present in 30.1% (n = 28) and 34.5% (n = 48) of the MHO and MHUO groups (6.2 ± 0.7 and 6.8 ± 1.3, respectively; p = 0.042). Among the features included in the MHUO definition, WC, TG and glucose were positively correlated with uric acid (r = 0.275/p<0.001; r = -0.199/p = 0.002 and r = 0.156/p = 0.017, respectively) while HDL-c was negatively correlated (r = -0.188/p = 0.004). Circulating uric acid concentrations increased with the increasing number of the features of the MHUO definition (B = 0.153; p = 0.045).
Conclusion: In our Brazilian population, hyperuricemia was present in both obesity phenotypes, but higher in the MHUO. In this phenotype, as individuals had more components of the MHUO definition, the circulating uric acid levels were higher.

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4 – Metabolic Syndrome and Inflammation: Is There a Microvascular and an Incretin System Impairment in the Gastrointestinal Tract?

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Introduction: Metabolic syndrome is a multifactorial disorder characterized by increased plasma levels of glucose, cholesterol and triglycerides, but also overweight and obesity promoted by increase of body fat mass, alterations in oxidative stress, chronic low grade inflammation and resistance to insulin leading to risk of cardiovascular diseases. [(1)] The stomach and the intestine have an essential role in metabolism with functions of digesting food and absorption of nutrients. Also, the intestine produces incretin hormones, such as GLP-1 which regulates glucose metabolism and processes of the gastrointestinal tract. [(2)]
Objectives: We aim to evaluate the inflammatory status, blood and lymphatic microvasculature and the incretin system in the intestine and stomach in animals exerting metabolic syndrome.
Methods: It was assessed the expression of IL-6, 3-NT, CD31, LYVE-1 and GLP-1 receptor on tissues from the stomach and intestine of C57BL/6 mice, divided in two groups, a high fat diet and a normal diet group.
Discussion and Conclusion: The results suggest that metabolic syndrome promotes alterations in the inflammation status, vascularization and in the incretin system of gastrointestinal tract. In high fat diet mice, it was observed higher levels of inflammation, no alteration in expression of 3-NT, lower blood microvascular density, lower number of lymphatic vessels and decreased expression of GLP-1 receptor. Further studies are important to understand other molecular mechanisms involved in metabolic syndrome and their possible influence in the gastrointestinal tract.

Keywords: metabolic syndrome, inflammation, incretin system, microvasculature, gastrointestinal tract

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5 – Is the MTHFR C677T Polymorphism Associated with Obesity Risk? – a Meta-Analysis.

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Background: Overweight and obesity are a major worldwide health problem and its incidence is increasing every year. [(1)] Methylenetetrahydrofolate reductase (MTHFR) plays an important role in folate metabolism and as a regulator of DNA methylation, synthesis, and repair. MTHFR gene is polymorphic at nucleotides 677 (C→T) and 1298 (A→C). MTHFR C677T polymorphism results in alloenzymes with decreased activity and several studies have pointed to association between the MTHFR C677T polymorphism and overweight/obesity risk. [(2)]
Objectives: The present study aims to contribute to the elucidation of the impact of any C677T overweight/obesity association through a meta-analysis study of published case control studies.
Material and Methods: Pubmed, Google Scholar, Elsevier and Cochrane trials databases were searched for case control studies of associations between MTHFR C677T polymorphism and overweight/obesity. Odds ratios (ORs) with 95% confidence intervals (CIs) were estimated to assess the association.
Results: Our results suggest that MTHFR C677T polymorphisms may modify the association between intracellular folate levels and overweight/obesity risk. Homozygous individuals for the MTHFR 677T polymorphism may have a significantly increase of obesity risk.
Conclusion: Our results suggest an association between MTHFR C677T polymorphism and risk of being overweight/obese.

Keywords: MTHFR, C677T, polymorphism, obesity, risk.

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6 – Polyphenols Modulate Type 2 Diabetes: Relevance to Angiogenic Paradox

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Background: Diabetes *mellitus* (DM) is responsible for metabolic de-