

concentration, but the inflammatory environment could also lead to EPO resistance. Higher lymphocyte concentration in the blood results in lower Hgb concentration change during treatment. In order to achieve required Hgb change, the increase of CRP above the normal range may result in double the dose of EPO needed.

<http://dx.doi.org/10.1016/j.pbj.2017.07.053>

#### PS061

### The relationship between Calcium-Scor and the risk of coronary artery disease in patients with heart failure

Mahdi Safiabadi<sup>1,2,\*</sup>, Nasim Naderi<sup>1</sup>,  
Sepideh Taghavi<sup>1</sup>

<sup>1</sup> Department of Heart Failure and Transplantation, Shaheed Rajaei Cardiovascular, Medical and Research Center, Tehran University of Medical Sciences, Tehran, Iran

<sup>2</sup> Student Research Committee, Baqiyatallah University of Medical Sciences, Tehran, Iran  
E-mail address: [dr.masafi1990@yahoo.de](mailto:dr.masafi1990@yahoo.de)  
(M. Safiabadi).

**Aim:** The purpose of this study was evaluating relationship between coronary calcium score in detecting the risk of coronary artery disease in patients with heart failure.

**Introduction:** Heart failure (HF) is an abnormality of cardiac structure or function leading to failure of the heart to oxygen delivery. Angiography is discussed as a gold standard for diagnosis of coronary artery disease but Cardiac CT-Scan recently is typical imaging technique which is low-cost and non-aggressive technique to determine coronary artery calcification.

**Methods:** This is case-control study that was conducted in Services Hospital. All Patients referring to Heart failure department were EF (Ejection fraction)  $\leq 35\%$  and all of them previously examined by Coronary Angiography or Coronary CT-Angiography to know the coronary artery status. The case group was patients with CAD related heart failure and control group was patients with normal coronary or Non-CAD Related-HF. All patients in both groups were evaluated with Conventional CT-Scan for calculated the Calcium score.

**Results:** Ninety patients with HF divided into case group ( $n = 40$ ) and control group ( $n = 50$ ). The average of EF in case group was  $29.25 \pm 5.05$  and in control group was  $27.7 \pm 7.09$ . The amounts of calcium score in each Categories (Mild, Moderate, Severe and Extensive) in case group was 33%, 18%, 13% and 5%, but control group in Categories (Mild, Moderate, Severe) was 20%, 6% and 4% respectively.

There was a statistically significant correlation ( $r = 0.835$ ;  $p < 0.0001$ ) between calcium score and results of angiography. There was linear relationship between calcium score and age of patients with heart failure ( $r^2 = 0.807$ ). No significant difference was found between genders in terms of calcium score ( $p = 0.353$ ).

**Conclusion:** There was high correlation between calcium score and results of angiography. Calcium scoring is reliable tool for screening patients with CAD.

<http://dx.doi.org/10.1016/j.pbj.2017.07.054>



#### PS083

### Levels of 6-thioguanine nucleotides and clinical remission in inflammatory bowel disease – A systematic review and meta-analysis

M.M. Estevinho<sup>1,\*</sup>, J. Afonso<sup>1</sup>, I. Rosa<sup>2</sup>, P. Lago<sup>3</sup>,  
E. Trindade<sup>4</sup>, L. Correia<sup>5</sup>, C.C. Dias<sup>6</sup>,  
F. Magro<sup>1,7</sup>, on behalf GEDII (Portuguese IBD Group)

<sup>1</sup> Department of Pharmacology and Therapeutics, Faculty of Medicine of the University of Porto, Portugal

<sup>2</sup> Gastroenterology Department, Instituto Português de Oncologia de Lisboa, Lisboa, Portugal

<sup>3</sup> Gastroenterology Department, Centro Hospitalar do Porto, Porto, Portugal

<sup>4</sup> Department of Pediatrics, Centro Hospitalar São João, Porto, Portugal

<sup>5</sup> Department of Gastroenterology and Hepatology, Hospital de Santa Maria, University of Lisbon, Lisbon, Portugal

<sup>6</sup> Department of Community Medicine, Information and Decision in Health, Faculty of Medicine of the University of Porto, Portugal; CINTESIS - Centre for Health Technology and Services Research, Porto, Portugal

<sup>7</sup> Department of Gastroenterology, Faculty of Medicine, Centro Hospitalar São João, Porto, Portugal  
E-mail address: [mmestevinho@gmail.com](mailto:mmestevinho@gmail.com)  
(M.M. Estevinho).

**Aim:** This systematic review and meta-analysis aimed i) to assess the clinical value of 6-thioguanine nucleotides (6-TGN) thresholds (200, 225, 230, 235, 250 and 260 pmol/8 × 10<sup>8</sup> RBC); and ii) to compare mean 6-TGN concentrations between patients with active disease and those achieving remission.

**Introduction:** Thiopurines are widely used as immunosuppressive drugs in the management of inflammatory bowel disease even though their minimum effective dose and dose-response relationship remain controversial. In addition, the monitoring of thiopurines' pharmacological active metabolites is currently reserved for particular cases namely in refractory patients or when non-compliance or toxicity is suspected.

**Methods:** Literature search was carried out following PRISMA and Cochrane Collaboration Guidelines and four databases were used (PubMed, Web of Science, ScienceDirect and the Cochrane Central Register of Controlled Trials). Statistical heterogeneity was assessed using the I<sup>2</sup> statistic followed by subgroup and sensitivity analyses. Odds ratios (ORs) were computed under the random effects model.

**Results:** The systematic search identified 1384 records of which 25 matched the inclusion criteria and were retained for further analysis. From these, 22 were used in the cut-off comparisons while 12 were used in the 6-TGN mean differences analysis. The global OR for remission in patients with 6-TGN concentrations above the predefined thresholds was 3.95 (95%CI, 2.63–5.94;  $p < 0.001$ ). When considering each of the six thresholds individually, the OR was significant for levels above 235 pmol/8 × 10<sup>8</sup> RBC (OR = 2.25) and 250 pmol/8 × 10<sup>8</sup> RBC (OR = 4.71). Mean 6-TGN levels were significantly superior among patients achieving clinical remission, with a pooled difference of 63.37 pmol/8 × 10<sup>8</sup> RBC (95%CI, 31.81–94.93;  $p < 0.001$ ).

**Conclusion:** These results reinforce that 6-TGN levels are related to clinical remission and give an insight into the thresholds that may be used to guide clinical decisions.



**Acknowledgements:** This work was supported by the Portuguese Group of Studies in Inflammatory Bowel Disease (GEDII).

<http://dx.doi.org/10.1016/j.pbj.2017.07.055>

## PS020

### Influence of energy drinks on hemodynamic parameters in young healthy adults – Randomized double-blind placebo controlled cross-over study



M. Niemczyk\*, M. Stopa, M. Łobacz, K. Rutkowska, A. Radko

*Students' Scientific Group at the 1st Department of Cardiology, Interventional Electrophysiology and Arterial Hypertension in Cracow, Poland*

*E-mail address: [magdaniemczyk29@gmail.com](mailto:magdaniemczyk29@gmail.com) (M. Niemczyk).*

**Aim:** Assessment of the influence of single dose of energy drink on blood pressure, heart rate, ECG, cardiac output and vascular compliance in healthy volunteers.

**Introduction:** An energy drink (ED) is a type of beverage containing stimulant drugs, caffeine, taurine, which is marketed as providing mental and physical stimulation. The popularity of product is increasing especially among teenagers and young adults. Some research suggest that its consumption may have negative effect on cardiovascular system.

**Methods:** A randomized double-blind placebo controlled cross-over study was conducted on 18 healthy volunteers (7 female, 11 male, mean age  $23.67 \pm 1.19$ ). Subjects received: 500 ml of energy drink containing 160 mg of caffeine, 2 g of taurine and 50 mg of guarana or 500 ml of placebo. Participants drank beverages in random order during two different meetings. Drinks did not differ in taste, smell and color. In all participants before and after consumption of a drink following procedures were performed: peripheral and central systolic and diastolic blood pressure (SBP and DBP) measurement, ECG recording, echocardiography, and pulse wave velocity analysis – in the same sequence and time intervals for every participant.

**Results:** ED consumption was related to significant increase of SBP in 75 min of observation compared to placebo ( $\Delta$ SBP for ED  $5.7 \pm 10.2$  mmHg vs  $-0.3 \pm 7.2$  mmHg for P,  $p=0,03$ ). ED caused increase in central SBP ( $107.8 \pm 13.2$  vs  $115.6 \pm 12.1$  mmHg,  $p=0,0005$ ), and central DBP ( $73.9 \pm 11.9$  vs  $78.1 \pm 10.2$  mmHg,  $p=0,02$ ). However comparison between placebo and ED revealed no significant differences in these parameters. The ECG parameters (HR, PQ, QRS and QTc intervals, axis of P wave, QRS complex, T wave) did not reveal significant differences between groups. There were no differences in echocardiographically determined cardiac output and LVEF.

**Conclusion:** Single dose ED consumption increases peripheral and central SBP. This effect is probably mediated by vascular wall properties and not by cardiac performance.

<http://dx.doi.org/10.1016/j.pbj.2017.07.056>

## PS055

### Analysis of genetic polymorphism 4a/b of the eNOS gene in infertile men



Miloš Lazić\*, Đorđe Radisavčević

*Institute of Human genetics, University of Belgrade School of Medicine, Germany*

*E-mail address: [miloslazic1512@live.com](mailto:miloslazic1512@live.com) (M. Lazić).*

**Aim:** The aim of our study was the analysis of genetic polymorphism 4a/b of the eNOS gene in infertile men with idiopathic infertility, correlation of genotype and phenotype in infertile men and comparing the results of testing of genetic polymorphism 4a/b with the results from the control group.

**Introduction:** Male infertility of unknown etiology represents a common medical and social problem, in whose basis lies a combination of genetic and environmental factors. Several recent studies have pointed to the possible connection of polymorphisms in eNOS gene and idiopathic male infertility.

**Methods:** The study included 50 infertile men with idiopathic infertility and 50 fertile controls. 4a4b polymorphism was detected by polymerase chain reaction (PCR).

**Results:** 4b4b genotype was detected in 27 (54%) patients and 36 (72%) controls, 4a4b genotype in 21 (42%) patients and 13 (26%) controls and 4a4a genotype detected in 2 (4%) patients and 1 (2%) control group participant. 4b allele frequency was 75% in the patient population and 85% in the control population, and frequency of allele 4a was 25% with patients and 15% in the control group. There was no statistically significant difference in the distribution of genotypes ( $p=0.062$ ) nor alleles ( $p=0.111$ ) between these two populations. Comparing 4a/b genotypes and serum concentration of FSH within patient group, we've detected a highly significant correlation ( $p<0.001$ ), where all carriers of 4b4b genotype had physiological concentration of serum FSH, while most of 4a4a and 4a4b carriers had higher serum FSH values.

**Conclusion:** Per our results VNTR (4a/b) is not connected to idiopathic male infertility in Serbian men, but they did show a highly significant correlation between serum FSH concentration and 4a/b genotype of infertile men.

<http://dx.doi.org/10.1016/j.pbj.2017.07.057>

## PS115

### Intravenous iron treatment effect to patients on hemodialysis



Vaida Kazlauskaitė\*, Skirmante Rekite

*Vilnius University, Faculty of Medicine, Lithuania*

*E-mail address: [kazlauskaitė.void@gmail.com](mailto:kazlauskaitė.void@gmail.com) (V. Kazlauskaitė).*

**Aim:** To evaluate the coherence between intravenous iron therapy and the inflammatory indicators to patients on hemodialysis.

**Introduction:** when the kidney function is failing, the number, of patients who has a final stage kidney disease with anemia, is increasing. One of the most important reasons of anemia is iron deficiency. The iron treatment may be intravenous or oral. Though the oral treatment is cheaper, it may cause gastrointestinal disorders. Intravenous iron therapy has a better tolerance, but earlier studies had showed that it increases the risk of infections to patients on hemodialysis.

**Methods:** The retrospective study included 33 hemodialysis patients who undergone the intravenous therapy during the 2016-10 and 2016-12 in Vilnius university hospital. The absolute numbers of neutrophils and lymphocytes, C-reactive protein and procalcitonin were assessed before the treatment with intravenous iron and a month after it.

**Results:** we analyzed 13 men and 20 women, the mean age 59 years, the mean creatinine  $760 \mu\text{mol/l}$ , the mean hemoglobin  $105 \text{g/l}$ . By the test of Wilcoxon signed rank the means of neutrophils and C-reactive protein increased after the start of the treatment with iron (the mean of C-reactive protein increased