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

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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) ≤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 ± 5.05 and in control group was 27.7 ± 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 (r² = 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

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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/8×108 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 I² 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/8×108 RBC (OR = 2.25) and 250 pmol/8×108 (OR = 4.71). Mean 6-TGN levels were significantly superior among patients achieving clinical remission, with a pooled difference of 63.37 pmol/8×108 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.