
PS128

Influence of blood inflammatory parameters to erythropoietin resistance in haemodialysis patients

Skirmantė Rékutė

Vilnius University Medicine Faculty, Lithuania
E-mail address: skirmante.rekute@gmail.com.

Aim: To evaluate the correlation between the inflammatory blood parameters and the resistance to EPO among the hemodialysis patients.

Introduction: Erythropoietin therapy is considered to be the standard treatment of anaemia in chronic kidney disease patients, yet some patients do not respond well to this therapy. This is called EPO resistance and could be generally associated with the chronic inflammation.

Methods: A retrospective one single centre study, which analysed medical records of 30 HD patients who had advanced CKD and received EPO treatment in Vilnius University Hospital Santaros Clinics from 2016–2009 to 2016–2011. Data analysed – concentrations of C-reactive protein, neutrophils, lymphocytes, platelets, as well as EPO dose per kilo and hemoglobin concentration (measured at the beginning of the EPO therapy and one month after the treatment).

Results: Patients were grouped into 2 categories: 1 group (n = 14) – concentration of hemoglobin increased, 2 group (n = 16) – concentration decreased after treatment. In 1 group average concentration of platelets were statistically significantly (p = 0.039) higher (230.2 ± 73.70), compared to 2 group (174.1 ± 66.96).

Furthermore, platelets concentration among patients with hemoglobin level of >100 g/l (n = 17) after one month of treatment were statistically significantly (p = 0.012) higher (231.06 ± 56.41) compared to those patients with hemoglobin level of <100 g/l (n = 13) (160.08 ± 78.17).

Additionally, patients with hemoglobin levels after one month of treatment 100–125 g/l (n = 15) were separated into two groups based on C-reactive protein level: >5 (1 group) and <5 (2 group). Average concentration of erythropoietin was statistically significantly higher in 1 group (n = 9) (223.82 ± 69.15 V/kg) than in 2 group (n = 6) (116.68 ± 59.68 V/kg).

Correlation analysis revealed that among patients with hemoglobin levels of <110 g/l after treatment there is a statistically significant positive correlation (+0.428) between change of hemoglobin levels before and after treatment and erythropoietin dose and statistically significant (p = 0.023) negative correlation (−0.481) with lymphocytes concentration in blood.

Conclusion: HD patients with a higher concentration of platelets respond to EPO therapy better than those with a lower concentration. Increased EPO dose results in higher Hgb concentrations.

http://dx.doi.org/10.1016/j.pbj.2017.07.052
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 Safiabadi1,2,*, Nasim Naderi1, Sepideh Taghavi1

1 Department of Heart Failure and Transplantation, Shaheed Rajaei Cardiovascular, Medical and Research Center, Tehran University of Medical Sciences, Tehran, Iran
2 Student Research Committee, Bagiyatallah University of Medical Sciences, Tehran, Iran

E-mail address: 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) ≤ 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