8th Global Cardiologists & Echocardiography Annual Meeting

July 18-20, 2016 Berlin, Germany

Role of high sensitive troponin-t and n-terminal pro BNP in assessing the pathophysiology and prognosis in sepsis associated myocardial dysfunction

G Vijayaraghavan, P T Suhail and V K Suresh Kumar Kerala Institute of Medical Sciences, India

Background: Sepsis patients with myocardial injury have very high mortality (30-60%). Only a few studies incorporating electrocardiography, high sensitive troponin T (hsTnT), N-terminal pro-BNP (pro-BNP) and echocardiography has been conducted in these patients.

Methods & Results: Out of 204 patients with sepsis enrolled, 111 patients satisfied the inclusion criteria and 103 completed the study. Myocardial injury was defined by elevation of hsTnT > 25 pg/ml. Initial hsTnT, pro-BNP and 2D echocardiography were repeated if sepsis progresses. Primary and secondary end point was in hospital mortality and left ventricular dysfunction (LVD). Simple sepsis was diagnosed in 45%; 19% had septic shock and 36% developed severe sepsis. Male predominance (63%) was with majority being diabetic (66%) and above 50 years of age (54%). Sinus tachycardia was present in 65% and T inversion in inferior leads in 32%. Systolic dysfunction (SD) was present in 42%, diastolic dysfunction (DD) in 21% and 21% had both SD and DD. HsTnT was elevated in 84% of the patients. Both HsTnT and pro-BNP were significantly correlated with LVD (p<0.001).Though pro BNP and HsTnT vary in different levels of LVD, variation was more marked with pro-BNP. Both levels were lesser in DD than SD. Grade III DD was always associated with severe SD .Pro-BNP had significant correlation with pro-calcitonin level (p<0.001) and APACHE II score (p<0.001); HsTnT had significant correlation only with APACHE II score (p<0.001). CRP level did not have correlation with cardiac markers. In hospital mortality was 8%. Pro BNP has better correlation with the survival. ROC curve showed that a pro-BNP level >8530 pg/ml signified with mortality (sensitivity-100% and specificity-80%) and HsTnT level >178pg/ml correlated with mortality with 88% sensitivity and 71% specificity. Creatinine was elevated in 55% during the sepsis and had linear correlation with hsTnT level (p<0.01).

Conclusion: Pro-BNP is a powerful tool for prognostication in sepsis with myocardial dysfunction and a value >8530 pg/ ml signified decreased survival with 100% sensitivity. The significant elevation of pro-BNP with minimal elevation of hsTnT indicated that the pathophysiology is mainly myocardial stretch and not myocardial necrosis in sepsis; with full recovery in survivors.

drvijayaraghavan@gmail.com

Parasitic cardiomyopathies

Mahmoud M Elsibaei Ain Shams University, Egypt

Many parasitic diseases can involve the myocardium, pericardium or both leading to miscellaneous syndromes that involve the myocardium are trypanosomes, toxoplasmosis, cysticercosis, trichinellosis; that involve the pericardium are *Entamoeba, Echinococcus*. Other miscellaneous syndromes are also involved: pathology, pathophysiology & clinical manifestation of the heart involvement will be explained in details in this presentation.

drmahmoud_elsebaei1@med.asu.edu.eg