

Role of acid-base balance at admission in risk stratification of patients with acute myocardial infarction

by *AbdelMohsen Aboualia | AbdelRahmanIbrahim | Akram Ibrahim Younis*

Abstract Id: 10 Submitted: August 17, 2016 Event: Controversies and Advances in the Treatment of Cardiovascular Disease: The Sixteenth in the Series Topic: Coronary Artery Disease

Background: Few data are available on the acid-base imbalance in acute myocardial infarction (AMI).

Aim of the work: is to evaluate the role of acid-base balance on the in-hospital complications of AMI patients submitted to coronary revascularization.

Patients and methods: 100 patients with ST elevation AMI. All patients were subjected at admission to full history taking including risk factors of coronary artery disease, electrocardiogram, echocardiogram, laboratory analysis and basic metabolic profile, and during ICU Stay to continuous monitoring to detect occurrence of arrhythmias and signs or symptoms of heart failure (HF).

Results: smoking, hypertension, diabetes and family history for coronary artery disease (FH) were predictors for the occurrence of arrhythmia, while, dyslipidemia, age and male gender were not predictors. In this study; hypertension, dyslipidemia, male gender and FH were predictors for the occurrence of reduced ejection fraction (EF) , while smoking, diabetes and age were not predictors. In this study; $\text{pH} < 7.35$, serum $\text{HCO}_3^- < 22$, base deficit > -3 , anion gap > 12 , serum $\text{Cl}/\text{Na} < 0.79$, and high uric acid level were predictors for the occurrence of arrhythmia and reduced EF. There was a positive correlation between EF and pH, serum bicarbonate level, base excess, and serum chloride/sodium ratio. While there was a negative correlation between EF and anion gap and serum uric acid level.

Conclusion: PH, serum bicarbonate level, base excess, serum chloride/sodium ratio and anion gap are predictors for the occurrence of arrhythmia and reduced EF.