J Bioanal Biomed 2019, Volume 11
DOI: 10.4172/1948-593X-C1-048

New and emerging biomarkers in the diagnosis and management of heart failure

Samer Ellahham
Cleveland Clinic, UAE

Heart failure is a growing epidemic worldwide. It is a growing challenge both in diagnosis and management globally. Current diagnostic tools have several merits and limitations and the field is in dying need for effective and efficient biomarkers. Emerging biomarkers show promising evidence of revolutionizing the early diagnosis and management of heart failure by cardiologists and non-specialists. Early diagnosis and management remain, the gold standard to prevent adverse events and therefore there is a shift toward early diagnostic tools such as the biomarkers. Since current diagnostic tools are in short of sensitivity and specificity, biomarkers have gained significant attention within the last decades owing to their strength in early diagnosis, risk stratification, high sensitivity and specificity and disease progression in patients with HF. For biomarkers to be used in current practice, they should show severity of ongoing disease and response to treatment to be able to tailor treatment for every individual. Biomarkers are classified according to myocyte changes as such biomarkers in myocyte stress, injury and necrosis, ischemia and fibrosis. In addition, there are biomarkers in heart failure associated with infections, renal dysfunction and neurohormonal biomarkers. There are several challenges still existing in diagnosis and management. More data are needed to define the clinical utility of some of these biomarkers. The emerging field of biomarker research is promising and deserves utmost attention. While it is a long journey, the field of biomarkers has added and will provide a groundbreaking methodology in early diagnosis and optimal management of heart failure. Outcome based research through randomized controlled clinical trials will certainly position biomarkers in heart failure in most relevant clinical practice guidelines.

samerellahham@yahoo.com