INTRODUCTION

Prognosis of patient is important in risk stratification and for efficient use of hospital resources . predicting the outcome of patients in intensive care environment is of particular significance , to ensure that resources are used appropriately . Numerous biomarkers have been evaluated to predict morbidity and mortality in the intensive care setting , although none have proved entirely useful . Examples of such biomarkers include cytokines , procalcitonin, c-reactive protein ,cell free nucleic acid and cardiac troponin .

Shock may be defined as impairment of the normal relationship between oxygen demand and oxygen supply . As aconsequence , there are determental alterations in tissue perfusion resulting in a reduction in the delivery of oxygen and other nutrients to tissue beds and causing cellular and then organ dysfunction . In hypovolemic , cardiogenic ,and obstructive forms of shock , the primary defect is a fall in cardiac output , leading to hypoperfusion , hypotension and anaerobic metabolism [1].

In septic shock , however , thereis complex interaction between pathologic vasodilatation , relative and absolute hypovolemia, direct myocardial depression , and altered blood flow distribution , which occur as aconsequence of the inflammatory response to infection . Even after volume restoration , maldistribution of normal or increased cardiac output typically persists as a consequence of micro-vascular abnormalities . In addition , cellular and organ injury

also occur as direct consequences of the inflammatory response in sepsis and as a consequence of hypoperfusion [1].

Sepsis is the hosts reaction to invading microbes and involves a rapidly amplifying polyphony of signals and responses that may spread beyond the invaded tissue . Fever or hypothermia , tachypnea and tachycardia often herald the onset of sepsis and systemic response to microbial invasion .

Natriuretic peptides are biomarkers that were previously introduced for diagnosis and risk stratification in patients with acute coronary syndrome and congestive heart failure , respectively . However their prognostic and diagnostic impact in critically ill patients warrants definition . The elevation of natriuretic peptides in patients with sepsis , severe sepsis and septic shock has been shown to indicate poor prognosis[2].