ABSTRACT

Objectives*:* to study the prognostic value of RIFLE classification in prediction of mortality in patients with sepsis and systemic inflammatory response syndrome (SIRS) presented with or developed AKI.

Design: a prospective, comparative, cohort, non-controlled, single center study.

Setting: Medical and Surgical ICU's of Critical Care Department in Kasr-Alainy Hospital of Cairo University.

Patients: sixty critically ill patients with sepsis and systemic inflammatory response syndrome (SIRS) presented with or developed AKI, not including those with disseminated malignancies, chronic liver cell and chronic renal failure.

Intervention: All included patients were subjected to informed consent, detailed history taking, careful physical examination, Laboratory investigations; including: routine lab tests, daily urea and creatinine.

Measurements: For all included patients with sepsis and systemic inflammatory response syndrome (SIRS) presented with or developed AKI , ***APACHE II was calculated on admission , SOFA,MODS and RIFLE scores*** were calculated at baseline (on admission) and subsequently thereafter on day 3, 5, 7,14, 30 and day 60 until ICU discharge or death or up to a total of 60 days. Clinical outcome (duration of stay in the ICU, need for mechanical ventilation, need for inotropic/vasopressor support, need for haemodialysis , and final outcome of survival/mortality rates) were recorded.

Results: Through comparison between *patients who improved or survived* and *patients who died*; there was a significant variance between both groups in terms RIFLE binary (P value <0.006), need for vasopressors (P value <0.0001), need for RRT (P value 0.0001).

Overall mortality was 26 patients out of 60 patients (43.3%), there was statistically significant difference between patients with any RIFLE classification and those without regarding mortality (P value > 0.006) we found that as RIFLE worsen the mortality increased.

Conclusion: The RIFLE category is a simple, reproducible and easily applied evaluation tool with good prognostic capability that might generate objective information for patient families and physicians and supplements the clinical judgment

of prognosis.

Key words: septic patients; AKI ; Sepsis; MODS; APACHE II score ; SOFA score; RIFLE score; Clinical outcome and mortality.