Abstract

Objectives*:* To study the correlation between the incidence of DIC in critically ill patients with APACHE II score ≥ 25 and the incidence and outcome of MODS, and to investigate the relation between DIC and increasing mortality.

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: Fifty critically ill patients with APACHE II score ≥ 25, not including those with disseminated malignancies, chronic liver cell failure, chronic renal failure on regular haemodialysis and chronic haematological disorders.

Intervention: All included patients were subjected to informed consent, detailed history taking, careful physical examination and laboratory investigations; including: routine lab tests, serum fibrinogen and D-dimer levels.

Measurements: For all included patients with ***APACHE II score ≥ 25*** on admission, ***DIC and SOFA scores*** were calculated at baseline (on admission) and subsequently thereafter every 48 hours until ICU discharge or death or up to a total of 28 days. Clinical outcome (duration of ICU stay, 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 both groups of studied patients *survivors and non-survivors*; there was a significant variance between both groups in: SOFA score at day 2, day 4 and on discharge (P value 0.01,<0.001and <0.001 respectively), DIC score at day 2, day 4 and upon discharge (P value 0.01,<0.001and <0.001 respectively), liver cell failure (P value 0.033), CNS failure (P value 0.042), hemodynamic instability (P value 0.003), need for mechanical ventilation (P value <0.001), need for vasopressors (P value 0.002), need for RRT (P value 0.072).

Conclusion: A significant correlation between SOFA and DIC scores in critically ill patients with APACHE II score ≥ 25 as regard MODS and mortality. It's recommended to combine the above scores together for better mortality prediction.

Key words: Critically ill patients; Quantitative D-dimer level; DIC; Sepsis; MODS; APACHE II score ≥ 25; SOFA score; DIC score; Clinical outcome and mortality.