

Title: Early recognition of sepsis in an Emergency Cardiology Unit.

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Objective: Describe the results of the implementation of a managed protocol (Sepse Project) for the recognition and care of sepsis patients admitted to the Emergency Clinical Unit (UCE) to improve management practices and reduce lethality rates.

Methods: Prospective patient data were collected during a 6-month period in 2014, called pre-intervention period. According to the ILAS guidelines, aiming at early diagnosis, hemoculture and administration of appropriate antibiotic within 60 minutes after inclusion were registered. After training doctors and nurses, demographic data, history of comorbidities, site of infection, time for recognition of organ dysfunction, time for antibiotic administration, presence of shock, mechanical ventilation for more than 24 hours, collection of blood cultures, volume/vasopressor management, lactate dosage, length of hospital stay and hospital death. In July 2015, as a result of the adoption of the Patient referral System for UCE, patients were divided into 3 groups according to admission period: Phase 1 (pre-intervention period), phase 2 (post-intervention and pre-referencing period) and phase 3 (post-admission and post referencing).

Results: 518 patients were included: 55% male and 67 years old (19 – 100). 51 cases belonged to phase 1; 103 to phase 2 and 364 to phase 3. Pneumonia were the most frequent infection, followed by urinary tract and skin and soft tissues. Ceftriaxone was prescribed in more than half of cases. Comparing pre and post-implementation of Sepsis Project, there was a time reduction between admission and sepsis diagnosis (443 ± 995 vs 193 ± 560 min ($p < 0,001$), a time reduction between sepsis diagnosis and first antibiotic dose (198 ± 174 vs 71 ± 111 min $p < 0,001$), less progression to septic shock (29,1% x 45,6% $p = 0,003$). After multivariate analysis, age > 60 years, heart failure and septic shock were associated to hospital death.

Conclusion: Implementation of a managed protocol in UCE allowed to anticipate the diagnosis of sepsis/ septic shock, to improve the treatment and was associated with lower hospital mortality.