



Abstract

SG-iSRRS1078

Analysis of patients with sepsis from the Japanese Rapid Response System on-line registry: - Clinical feature difference of septic patients between university hospitals and community hospitals-

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Objectives:

The RRS online registry was introduced in 2011 to understand the situation of the RRS in Japan and 32 facilities participated and 5,720 cases were collected. Sepsis, which requires early detection and early interventions, is one of the main target diseases to minimize unexpected in-hospital cardiac arrest.

Methods:

We analyzed the sepsis cases from Japanese RRS registry data and reports clinical feature difference of septic patients between university hospitals and community hospitals.

Results:

We identified 672 patients (11.7%) with sepsis from 5,720 registry patients. Average age was 69 years old and male were 429 (63.8%). The proportion of sepsis in RRS cases was 14.7% in general hospitals and 8.6% in university hospitals. Many patients in university hospitals had tracheal intubation more than general hospitals (24.2% vs. 11.5%, $p < 0.05$), and many patients became ICU transfer (63.2% vs. 19.6%, $p < 0.05$). Most frequently activated criteria in sepsis was de-saturation (19.0%), followed by hypotension (18.4%) and tachypnea (12.6%). Multiple activated criteria were identified in 53.6%. 32.0% of de-saturation associated with tachypnea and 27.6% of low blood pressure associated with altered mental status. In the vital sign of sepsis on team arrival, 293 cases (43.6%) were 2 qSOFA points, and 81 cases (12.1%) were 3 qSOFA points. The proportion of enrolled sepsis cases had increased from 10.5% to 16.3% since the definition of sepsis changed from SEPSIS-2 to 3.

Conclusions:

More severe sepsis patients were activated in university hospitals than general hospitals. The change of the Sepsis definition made a rise in the number of registered sepsis cases. Precise feedback to institutions can achieve good outcome.