Factors Determining the Appropriateness of Ceftriaxone Usage at an Emergency Room in a University Hospital in Thailand

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**Background:** Ceftriaxone is one of the most common empirical antibiotics that is prescribed at emergency room in Thailand. Inappropriate prescriptions of antibiotics were frequently reported. We aimed to study factors determining the appropriateness of ceftriaxone usage at an emergency room in a university hospital in Thailand.

**Methods:** A retrospective cohort was conducted among patients with age of > 15 years old, received ceftriaxone for the empirical treatment at an emergency room at Ramathibodi Hospital between April 1 and May 31, 2010. Appropriateness of ceftriaxone usage was considered according to local recommendations and current published guidelines.

**Results:** During the 2-month study period, 278 (68.0%) of 409 patients received ceftriaxone at the emergency room was analyzed. Of these, 109 (39.2%) were men with a median (IQR) age of 62.2 (45.2-75.7) years old. Ceftriaxone usage was considered appropriate in 162 cases (58.3%). By multiple logistic regression, male gender (OR 0.51, CI 0.27-0.97), fever (OR 3.12, 95% CI 1.3-6.11), signs and symptoms of infections (OR 2.92, 95% CI 1.37-6.28), suspicion of sepsis (OR 7.90, 95% CI 3.67-17.07), and diagnosis of gastrointestinal tract infection (OR 0.20, CI 0.05-0.77) were associated with appropriateness of ceftriaxone usage.

**Conclusions:** Proportion of appropriate use of ceftriaxone was fair. Appropriateness of ceftriaxone usage for empirical treatment depended on infection diagnosis criteria and organs of suspected infection. Interventions to improve appropriateness of ceftriaxone prescription should focus on these factors.