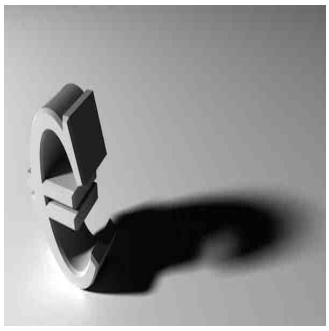
ICU
MANAGEMENT & PRACTICE

ESICM 2014: Can Protocols For Antibiotic Use Save Money?



A study presented by Dr. Hugo Calderón at the European Society of Intensive Care Medicine (ESICM) congress in Barcelona this month looked at whether implementing a protocol for antibiotic use affected patient mortality and admission costs. This followed reorganisation of the intensive care unit (ICU) of the Hospital de Faro in Portugal, when the number of beds increased from 9 to 16.

As part of a drive for quality improvement, protocols were implemented for surgical prophylaxis, prevention of infections related with central venous catheters, prevention of ventilator-associated pneumonia, antibiotic treatment of community-acquired pneumonia and peritonitis. The study aimed to assess the impact of implementation of the protocols on use of antibiotics and the number and type of microorganisms isolated in the ICU during the year 2013 as compared to the year 2012.

Methods

A retrospective analysis was conducted of crop yield from blood cultures, tracheal aspirate and tips of central venbous catheters, antibiotic consumption and costs.

Results

In 2012, 437 patients were admitted with a mean length of stay of 9.1 days. In 2013, 539 patients were admitted. The number of beds increased by 44% (09 to 16 beds), the number of admissions increased by 20% and the mean length of stay decreased to 8.3 days (10% reduction).

Yields of products for microbiological examination increased by 55% globally. The number of agents isolated in blood cultures increased 52%. Consumption of antibiotics by category decreased by 54% for carbapenems, 38% for antifungals and 14% for antipseudomonal beta-lactams. There was no significant difference in mortality. There was a 16% reduction in costs of antibiotics.

Conclusion

Implementing protocols led to an increase in the identification of microorganisms responsible for infections, allowed the practice of antibiotic de-escalation, and resulted in a reduction of the consumption of broad-spectrum antibiotics with consequent reduction in costs, but without increasing mortality. During the period studied, there was a reduction of around €18,000 in admission costs. Key was the introduction of new protocols, as the unit was working with the same antibiotics as before.

Claire Pillar
Managing Editor, ICU Management

Published on : Wed, 15 Oct 2014