MULTI-CENTRE STUDY ON THE COSTS AND OUTCOMES OF ANTIMICROBIAL TREATMENTS IN ITALY FOR COMPLICATED SKIN AND SOFT TISSUE INFECTIONS (cSSTI)

Tarricone R1, Aguzzi C2, Capone A2, Caravaggi CM3, Esposito S4, Franzetti F4, Muzzi A3, Ricci L1, Bassetti M1

1Bocconi University, Milan, Italy; 2IRCCS Spallanzani, Roma, Italy; 3Abbiategrasso Hospital, Legnano, Italy; 4Gesù and Maria Hospital, Napoli, Italy; 5Luigi Sacco Hospital, Milano, Italy; 6IRCCS Policlinico San Matteo, Pavia, Italy; 7San Donato Hospital, Arezzo, Italy; 8San Martino University Hospital, Genova, Italy

OBJECTIVES: Complicated skin and soft tissue infections (cSSTIs) are a common cause of morbidity at community and hospital levels. The present study aims at evaluating the costs and outcomes of antibiotic therapy for the treatment of cSSTI in Italy.

METHODS: The study was designed as retrospective, multi-centre, incidence-based and observational. The hospital perspective was considered. Seven hospitals were selected across the country and each hospital was asked to retrospectively recruit patients from January 2003 to August 2006. Hospitals were identified amongst those highly specialized in the treatment of infectious diseases and diabetic foot. The target population consisted of adult patients eligible to receive antibiotic therapy for cSSTI that was due at least in part to gram-positive organism and that required hospitalization and parenteral antimicrobial therapy for at least 96 hours. Consistently with the study perspective, direct hospital costs have been identified and measured through a micro-costing approach. Clinical variables and cost data were drawn from patients’ medical records and registered on Case Report Forms. RESULTS: A cohort of 307 patients was enrolled. Failure of initial antibiotic therapy resulted in 23% of patients. Average treatment with antibiotics lasted for 14.3 days and full cost of admission totalled Euro 6404. The right choice of first line antibiotics could save up to 3000 Euro per patient in case of “failure” avoided, of which 889 Euro were avoidable costs, that is they could actually be saved in the very short-run. These could be ultimately increased by Euro 92 for each hospital day avoided because of faster antibiotic action. CONCLUSION: Hospital resources could be freed and patients’ outcomes improved if 1) the right antibiotic is immediately selected at patient’s admission, and 2) the quickest antibiotic is chosen in eradicating the infection.

OUTCOMES AND COSTS OF HOSPITAL-ACQUIRED PNEUMONIA ASSOCIATED WITH PSEUDOMONAS OR METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS IN A SAMPLE OF BELGIAN HOSPITALS

Merchant S1, Akhras K2, Spaepen E3, Annemans L4

1Johnson and Johnson Pharmaceutical Services, L.L.C, Raritan, NJ, USA; 2IMS Health, Brussels, Belgium; 3Ghent University, Gent, Belgium

OBJECTIVES: The purpose of this study was to evaluate outcomes and costs of Ventilator-Associated Pneumonia (VAP) and Nosocomial Pneumonia (NP) caused by Pseudomonas or Methicillin-Resistant Staphylococcus Aureus (MRSA).

METHODS: Data analyses were performed using the January–June 2004 Minimum Basic Dataset that included data from 37 Belgian hospitals. NP patients were identified using an ICD-9-CM code of bacterial pneumonia (481.xx-486.xx) and at least one IV antibiotic administration during their hospital stay. Patients receiving mechanical ventilation were identified using the ICD-9-CM procedure code 96.7 and its sub-codes. VAP and NP patients were further classified into three groups (hospital length of stay or LOS, mortality, and total hospital costs) than NP patients. VAP/NP patients with Pseudomonas or MRSA were older and sicker compared to NP patients. VAP patients were sicker and had worse outcomes (hospital length of stay or LOS, mortality, and total hospital costs) than NP patients. VAP/NP patients with Pseudomonas or MRSA were older and sicker compared to VAP/NP in the Other group. LOS (days) for the VAP patients in the Pseudomonas (37) and MRSA (31) groups were higher than in the Other (29) group. For NP, the median LOS for the Pseudomonas (29) and MRSA (31) were higher than in Other (21). Hospital costs for the Pseudomonas group (Euros) were VAP = €31,602, NP = €13,832; for the MRSA group were VAP = €17,767; NP = €17,208; and Other group were VAP = €18,965, NP = €10,687. Mortality rates were higher in the Pseudomonas group (VAP = 54%, NP = 27%) compared to the Other group (VAP = 36%, NP = 16%); the numbers for MRSA were VAP = 27%, NP = 36%. The number of patients in the VAP-MRSA group (n = 11) was too small to make any meaningful conclusions. CONCLUSION: Overall, VAP patients had significantly worse outcomes and higher costs compared to NP patients. Pseudomonas-infected VAP/NP patients and MRSA-infected NP patients had worse outcomes and higher costs compared to VAP/NP patients infected with other pathogens.