OBJECTIVES: To describe therapy with a Betalactam antibiotic versus dual therapy with a Betalactam and an aminoglycoside treatment regimen in ICU patients with Pseudomonas aeruginosa nosocomial pneumonia and to evaluate treatment outcomes of the two groups. METHODS: We retrospectively identified adult patients admitted to a non-transplant ICU between August 1, 1999 and August 1, 2003 with documented Pseudomonas aeruginosa pneumonia. Patients had to receive at least 7 days of therapy with an anti-pseudomonal antibiotic to be included. Data collected included patient, clinical, treatment, and outcome related details. Independent sample t-test, chi-square and multiple regression analysis was used to evaluate the outcomes of the patients according to antibiotic groups. RESULTS: A total of 389 patients were identified with Pseudomonas aeruginosa pneumonia. Of these, 208 (53%) were on Betalactam ± fluoroquinolones (Group 1) and 181 (47%) were on Betalactam and aminoglycoside ± fluoroquinolones (Group 2). The mean age of patients was 63.1 and 55.4 years in Groups 1 & 2 respectively (p < 0.001). There was no significant difference in the distribution of gender and race between groups. Group 2 patients had more co-morbidities compared to Group 1. The mean length of antibiotic therapy in Group 1 was 24.77 and Group 2 52. Seventy-nine days (p < 0.001) and mean ICU length of stay was 27.6 and 55.2 days in Groups 1 & 2 respectively. The mortality in Group 1 was 51 (24.5%) and in Group 2, it was 65 (35.9%) (p = 0.014). CONCLUSIONS: The mean length of therapy, ICU length of stay and mortality are significantly lower in monotherapy compared to combination antibiotic treatment group.

RESPIRATORY DISEASES/DISORDERS

RESPIRATORY DISEASES/DISORDERS—Cost Studies

PRS2

COST OF CHRONIC BRONCHITIS (CB) AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN FRANCE: THE BRONCHECO STUDY

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OBJECTIVES: To describe the management of CB and COPD at stages 1 to 3 (SPLF classification, 1997) and to assess its cost in France. METHODS: In total, 409 CB and COPD patients were enrolled in the Broncheco cohort from November 2000 to October 2003 by 10 hospital chest physicians (HP), 50 private chest physicians (PP) and 63 general practitioners (GP). The cohort was followed for 1 year with data collection every 3 months: socio-demographic data, medical history and disease management (medication, oxygen, medical visits, medical procedures, hospitalisations and transportation). Inpatient costs were evaluated using the French Diagnosis-Related Groups and outpatient costs using the French nomenclature. Costs were expressed in 2003 Euro, according to the French societal perspective. Non-parametric statistical analysis was performed. RESULTS: In total, 316 patients were analysed (random dropout was tested) with a mean age of 65 years, a history of the disease of 8 years, 75% were male and 37% were current smokers. The distribution in stages was: 21.5%, 42.1%, 22.8% and 13.6% respectively in stages 1, 2a, 2b, and 3. The annual cost (both medical and non-medical) was 794€, 1936€, 3938€ and 7706€ respectively for stages 1, 2a, 2b and 3 (p < 0.001). The proportion of outpatient care in total cost decreased when stage of disease increased (94%, 70%, 63% and 62% respectively) while the proportion of inpatient care increased (6%, 30%, 37%, 38% respectively). For a same stage of disease, the costs were higher for HP, lower for PP and the lowest for the GP. High correlations between cost and age, length of disease and number of exacerbations were observed: 0.21, 0.23 and 0.49 respectively (p < 0.001). CONCLUSIONS: These results showed that the cost of COPD was considerably greater in patient with advanced stage of disease. This would suggest the pertinence of early management of disease.

PRS3

PHARMACOECONOMY AND ANTIBIOTIC TREATMENT WITHIN THE SLOVAK REPUBLIC

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OBJECTIVES: The aim of this study was to collect comparable and reliable data on the antibiotic consumption in Slovakia during the period 1998–2002. The special interest was paid to the trend of the macrolides usage and the resistance of Strep. pneumoniae. Antibiotic treatment and the pharmacoeconomic analysis of tonsillitis treatment was evaluated. METHODS: For the period 1998–2002, data for the ambulatory and hospital care were collected following the ATC/DDD classification. The results were expressed in the numbers of the packages, finance units (SKK) and Defined Daily Doses per 1000 inhabitants per day (DID). RESULTS: The collected data showed very high consumption of the antibiotic in Slovakia. Comparing to the published international data it was one of the highest consumers of antibiotics in Europe. The amount of packages used during the period 1998–2002 has decreasing tendency. Antibiotic usage expressed in DID showed moderate decrease. Consumption of macrolides was increasing during the studied period. Usage of drugs containing erythromycin and roxithromycin showed significant decrease. However, the usage of the drugs containing clarythromycin and azithromycin showed statistically important increase (p < 0.001). Different therapeutic procedures were classified by pharmaco economical method of the cost-minimization analysis. CONCLUSIONS: According to the results of this analysis, the most effective treatment of tonsillitis was pefloxymethylpenicillin 15.30 SKK and penamecillin 18.50 SKK. Usage of these drugs for the treatment is efficient and economically convenient (p < 0.001). According to the direct cost analysis, 52.2% of costs used for the treatment of tonsillitis was “wasted”. Wrong antibiotics were chosen in case of 58.5% of the patients.

PRS4

COST OF TREATMENT AND REIMBURSEMENT OF HOSPITALIZED COMMUNITY-ACQUIRED PNEUMONIA WITH I.V. MOXIFLOXACIN COMPARED TO STANDARD ANTIBIOTIC TREATMENT IN GERMANY

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OBJECTIVES: Inpatient treatment of community-acquired pneumonia (CAP) is generally non-invasive and therefore the financial burden for hospitals is dependent from length-of-stay. A fast recovery of the patients shows the need of rapid acting antibiotic treatment, especially under the German DRG-reimbursement system. This study investigated costs and charges of patients with CAP from the hospitals’ perspective. The new gyrase inhibitor moxifloxacin was compared to standard antimicrobial therapy of the participating hospitals. METHODS: The
observational study was conducted prospectively in a parallel group design. In 22 hospitals, 580 patients were enrolled, 261 patients in the moxifloxacin-(M-)cohort and 319 patients in the standard-(S-)cohort of other antibiotics. The economic perspective of a German hospital was applied for the cost measurement. After conduct of the study, the patient data were grouped into the relevant German DRG and the course of treatment, costs and reimbursement of both cohorts were analysed. RESULTS: The outcome of the patients at the beginning of treatment was comparable in both cohorts. The length-of-stay of the patients was significantly shorter in the moxifloxacin cohort for the more severe DRGs E62A (M-cohort 10.1 days, \(N = 113\); S-cohort 12.2 days, \(N = 164\); \(p = 0.004\)) and E62B (M-cohort 9.7 days, \(N = 112\); S-cohort 10.7 days, \(N = 146\); \(p = 0.041\)). In the third DRG E62C no differences were found (M-cohort 10.2 days, \(N = 36\); S-cohort 9.4 days, \(N = 9\); \(p = 0.306\)). Net profit per case for the hospitals in the DRG E62A was 1931€ and 1683€ for the cohorts M and S respectively (E62B: M 1363€, S 1296€; E62C: M 802€, S 791€). CONCLUSIONS: For the treatment of hospitalised CAP the study demonstrated the economical relevance of fast recovery secondary to efficacious drug therapy. Under current reimbursement modalities the treatment with moxifloxacin is more profitable from the hospitals’ perspective due to a shortened length of stay of the patients.

COSTS OF COMMUNITY-ACQUIRED PNEUMONIA FROM THE HOSPITAL’S PERSPECTIVE IN GERMANY—FINAL RESULTS OF A PROSPECTIVE OBSERVATIONAL STUDY

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OBJECTIVES: Since the beginning of 2004, the diagnosis-related-groups (DRG) are implemented in the reimbursement procedure for German hospitals representing a significant change for the hospitals economic situation. As an example for non-invasive treatment procedures in a German hospital, a prospective health economic study evaluated the treatment costs of community-acquired pneumonia (CAP) from the hospital’s perspective. Results of an interim analysis were published in 2003, now the final results of the study are presented. METHODS: Open, non-randomized prospective observational study from the perspective of the German hospital administration. In 11 study centres, 319 patients were enrolled. A process-cost-analysis was performed to determine the costs for the German hospital sector starting from the admission up to the discharge of the patient. The cost calculation comprises diagnostic and therapeutic measures, drugs, hotel costs and nursing. Both personnel costs and material costs were included. Acquisition of medical devices was not included into the analysis. RESULTS: The patients enrolled suffered from moderate to severe stages of CAP with a mean length-of-stay of 11.5 days (peripheral ward: 10.7; ICU 0.8). Mean costs per patient amounted to 1528€ (SD: 1011€). Most important cost-driving factors were hotel costs (640€) and nursing (554€). Drug acquisition cost resulted in 2016, whereas costs for diagnostics (80€) and therapeutic measures (54€) were comparatively low. The most often applied drugs were macrolides (37.6% of the patients), β-lactamase inhibitor-aminopenicilllin combinations (32.3%), and cephalosporins of 2nd (30.4%) and 3rd generation (28.5%). Thirty-six patients (11.3%) died during the hospital stay. CONCLUSIONS: In hospitalised CAP, length of stay determines the costs from the economic perspective of the hospital, which underlines the importance of a reduction of length of stay in this indication. The need for rapid and safe antibiotic treatment becomes evident especially under consideration of the DRG reimbursement system.

PR56
A CANADIAN COST ANALYSIS OF 4 RANDOMIZED DOUBLE-BLIND ACTIVE COMPARATOR TRIALS WITH TELITHROMYCIN IN ACUTE EXACERBATION OF CHRONIC BRONCHITIS (AECB) AND COMMUNITY-ACQUIRED PNEUMONIA (CAP)

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OBJECTIVE: To estimate health care costs for the treatment of acute exacerbation of chronic bronchitis (AECB) and community-acquired pneumonia (CAP) in 4 previously-reported Phase III multinational comparative trials of telithromycin vs amoxicillin-clavulanic acid and clarithromycin in Canada. METHODS: In each of the 4 studies, patients were followed for 1 month and the primary endpoint was clinical efficacy at the posttherapy/test of cure (TOC) visit. Each trial prospectively collected data on study indication-related hospitalizations, additional health care provider visits, and additional antibiotic therapy. Three trials also collected information on additional laboratory and other tests and procedures. Cost analyses were performed from the perspective of the Ontario Ministry of Health. RESULTS: A total of 1045 and 853 patients in the 4 trials were randomized to receive telithromycin or a comparator, respectively. At baseline, the patient groups were similar with respect to demographic and clinical characteristics. The clinical efficacy of telithromycin and the comparators was similar in each study. Compared to patients randomized to comparator, those randomized to telithromycin were less likely to require AECB- and CAP-related hospitalization. Total and average costs of care were approximately 2 to 3 times higher in the comparator groups, driven by higher hospitalization rates. The ratio of average total treatment cost per patient in each comparator to that of telithromycin was as follows: $40/$19 = 2.1 for amoxicillin-clavulanic acid in AECB; $241/$122 = 1.9 for clarithromycin in AECB; $198/$109 = 1.8 and $293/$90 = 3.3, for clarithromycin in CAP. CONCLUSION: Although clinical cure rates for telithromycin, amoxicillin-clavulanic acid, and clarithromycin are comparable, health care costs appear to be lower among patients taking telithromycin, a finding driven by fewer hospitalizations. Since hospitalization accounts for a major proportion of the direct health care costs associated with AECB and CAP in Canada, the use of telithromycin may significantly reduce the total costs of care for these respiratory conditions.

RESPIRATORY DISEASES/DISORDERS

RESPIRATORY DISEASES/DISORDERS—Quality of Life/Utility/Preference Studies

THE CHRONIC OBSTRUCTIVE PULMONARY DISEASE HAS A NEGATIVE IMPACT ON THE QUALITY OF LIFE OF THE PATIENT: THE RESULTS OF THE EPIDEPOC STUDY

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OBJECTIVES: COPD is a chronic disease that causes disability and increases with age. The aim was to assess the quality of life of COPD patient treated in Primary Assistance in Spain.

The total costs of care for these respiratory conditions.