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Background: Sepsis is associated with high rates of mortality in ICU (Intensive Care Unit). The broad spectrum antibiotic therapy and is more preferably used. However, there is a risk of bacterial resistance, which could increase mortality and the effectiveness of antimicrobial agents.

Objectives: To assess efficacy and safety of targeted antimicrobial therapy for blood culture results compared with empiric broad-spectrum therapy for the treatment of adult ICU patients with a diagnosis of sepsis, severe sepsis or septic shock caused by any microorganism.

Methods: A retrospective cohort analysis of medical records and laboratory data. Were selected records of patients with sepsis, severe sepsis and septic shock caused by any microorganism, with a positive blood culture result, submitted or not to antibiotic therapy prior to their admission to the ICU at two hospitals in the state of São Paulo. The primary outcome measures include: ICU mortality up to 28 days and mortality or discharged at the end of hospitalization. Secondary endpoints include duration of hospitalization, duration of ICU stay, multi-drug resistance and resistance to antimicrobial agents.

Results: Of the 314 patients diagnosed with sepsis, severe sepsis and septic shock were eligible for the study 92. Most patients underwent standard broad-spectrum therapy (empirical) (82.61 %). There were no significant differences ($p < 0.05$) between the clinical data of the two populations (gender, age, comorbidities and APACHE II). Treatments directed to the results of blood cultures were not different as those for empirical therapy in relation to the outcomes studied. Preliminary data indicate no differences between therapies.

Conclusions: We can't specify which of these therapies are effective at reducing mortality in patients with sepsis.

129. Analysis of Prescriptions Before and After Intervention of Evidence-Based Drug Formulary in Private Hospital in South Sumatra, Indonesia: A Quasi-Experimental Study

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Background: Expenditures for prescriptions drugs continue to increase, prompting hospital to adopt evidence-based drug formulary.

Objectives: To analyze prescription before and after implementation of evidence-based formulary in private hospital in South Sumatra, Indonesia.

Methods: Design: A quasi-experimental study

Setting: Data was extracted from electronic patient records from the medical record at the private hospital in South Sumatra, Indonesia, before intervention (2010-2011 data, 113.002 prescriptions) and after intervention (2012 data, 32.103 prescriptions).

Exposures or interventions: Evidence-based drug formulary

Main outcome measures: Generic usage, drugs cost per patient, average number of drug per patient, list of drug prescribed, the use of antibiotics

Statistical analysis: analysis of variance.

Results: Compared before intervention, generic drug usage was significantly increased (17% to 45%, $p < 0.001$) after intervention. Drug cost spent per patient was significantly decreased (IDR 329,536.41 to IDR 147,456.55, $p < 0.001$). Average number of drug per patient was significantly decreased (4.7 to 3.2). List of drugs prescribed by doctors was significantly decreased from 1229 to 941. The use antibiotics were change. Before intervention, the most widely use of antibiotics were amoxicillin + clavulacic acid (16.9%), cefuroxime (14.2%), clindamycin (12.3%) cefixime (12.1%) and cefadroxil (9.8%). After intervention, the most widely use of antibiotics were ciprofloxacin (20.2%), cefadroxil (12.7%), clindamycin (12.7%), cefixime (10.5%) and levofloxacin (8.2%). After intervention 5 high use antibiotics were amoxicillin + clavulacic acid (16.9%), cefuroxime (14.2%), clindamycin (12.3%) and cefadroxil (9.8%).

Conclusions: Intervention of evidence-based drug formulary in hospital decreased cost per patient, average number of drug per patient and list of drug prescribed. The usage of generic drugs was increased and the use of antibiotics were changed.

130. Endocrine Therapy for Breast Cancer Patients in South Africa

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Background: Endocrine therapy (tamoxifen and aromatase inhibitors (AIs)) has been shown to reduce the risk of recurrence and death in estrogen receptor positive(ER+) breast cancer patients.

Objectives: The aim of this study is to assess access to these medicines by comparing the estimated number of ER + breast cancer patients with actual use in a middle income country (South Africa).

Methods: Total annual sales data of tamoxifen and AIs for the period 2005-2012 (except 2010,2011) was retrieved from the IMS Health database. The data was converted into years of patient treatment using the defined daily does (DDD) for each medicine. The annual number of new cases of breast cancer patients per ethnicity was estimated using the national cancer registry reports of South Africa (2000-2005). The proportion of South African ER + patients was based on literature. The estimates were then stratified for menopausal status and disease stage. The total number of patients needing endocrine therapy was calculated assuming a 5-year treatment period. Scenario analyses were performed to compare utilization rates in different treatment combinations.

Results: Annual utilization of tamoxifen and AIs increased from 12,274 to 16,492 and from 1,961 to 6,106 patients treated per year during the study period, respectively. Assuming that all the ER + patients had been treated with (1) only tamoxifen or with (2) either tamoxifen or AIs, the median proportion of patients receiving treatment was 62% and 85%, respectively. Assuming that (3) only premenopausal patients were treated with tamoxifen and post-menopausal patients with AIs, all premenopausal patients were fully treated while only 38.5% of postmenopausal patients were treated. If in similar situation (4) post-menopausal patients were treated with tamoxifen or AIs (1:1 ratio), a median of 92% of premenopausal and 77% of postmenopausal patients were treated.

Conclusions: According to our data access to treatment in patients with ER + breast cancer has improved over the study period. Besides, the more realistic scenarios (2 and 4) suggest that endocrine therapy was sufficiently available for the patients in the last two years of the study.

131. Utilization Trends of Anti-Tumor Necrosis Factor Therapy in Taiwan

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Background: Clinical trials have suggested that initiation of tumor necrosis factor inhibitors (TNFi) improves disease control in patients with chronic inflammatory disease. Because of significant cost, TNFi was under restricted reimbursement criteria in Taiwan, critical utilization review helps to ensure the clinical value of new a biological product.

Objectives: To examine the trend and pattern of TNFi utilization in the practice setting in Taiwan.

Methods: A cross-sectional study was conducted using patient-level data from a large medical center in Taiwan from 1/2005 to 11/2013. Patients (n = 72,891) with either a prescription of TNFi (etanercept, adalimumab, golimumab) or a diagnosis with TNFi labeled indications were analyzed. TNFi labeled indication were rheumatoid arthritis (RA), psoriasis, ankylosing spondylitis (AS) and Crohn's disease (C). The annual incidence rate of TNFi initiation was estimated, demographics and pattern distribution of indication among TNFi new users were assessed using descriptive statistical analyses.

Results: Of 1,765 TNFi users with labeled indications, 4% of them aged < 18 and 50% of them ranged 45-60 years old and 38% of them were male patients. The most frequent indication of use was RA (69%), following by AS (22%), and 12% of users with more one indications. The annual incidence of TNFi use gradually increased from 0.48% in 2006 to 1.57% in 2013. The number of new users increased mainly due to AS from 13 in 2006 to 83 in 2013, psoriasis from 19 in 2006 to 77 in 2013, RA from 56 in 2006 to 174 in 2013. Only 26% new users (n = 450) received persistent therapy over 2 years (with a permissible gap between two refills <60 days). Specialists of rheumatology, allergy and immunology were responsible for 81% TNFi users, dermatology 14% and pediatrics 4%. There were 3% of TNFi users with off-labeled indications.

Conclusions: Initiation of anti-TNF therapy increased over the study period, and the increase was varied by indication. Few new users continued therapy for >2 years, reflecting the difference between trial setting and real-world experience. The study results emphasize the need for studying effectiveness and appropriateness of long-term use of anti-TNF therapy.