A NOVEL APPROACH FOR ESTIMATING RESOURCE UTILIZATION IN PATIENTS WITH SUSPECTED IMMUNE-MEDIATED COAGULOPATHY ASSOCIATED WITH EXPOSURE TO TOPICAL BOVINE THROMBIN

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OBJECTIVES: Exposure to topical bovine-derived thrombin has been associated with post-operative immune-mediated coagulopathy (IMC). Although rare, IMC has been associated with poor outcomes and additional clinical and financial burden. Formal economic analyses of IMC events have not been performed, in part due to the lack of specific diagnostic codes. The goal of this descriptive study was to develop a novel approach to calculate the economic burden and resource utilization in patients in the presence of this adverse event was suspected. METHODS: Data for bovine thrombin-exposed patients discharged between January 2005 and March 2009 were extracted from Premier’s Perspective database. Coagulopathies were identified utilizing a clinical algorithm based on International Classification of Diseases codes and consultations to the clinical immunology investigation of suspected coagulopathies, including IMC. The index hospitalization was the first observed use of bovine thrombin and suspected IMC in the study period. Length of stay (LOS), ICU LOS, total, and departmental costs per patient were calculated for the index hospitalization and any subsequent hospitalization with suspected coagulopathy. Costs were adjusted to 2009 dollars. RESULTS: A total of 450 patients exposed to bovine thrombin met the defined criteria for a suspected coagulopathy during their index hospitalization. Five of these patients had suspected coagulopathy during a subsequent hospitalization. The estimated total cost [median (range)] was $62,373 ($1,385-2,273,734), with a median ICU LOS of 13 days (2–161). CONCLUSIONS: The approach used in this study may be useful in quantifying the economic impact associated with IMC.

The use of tools to determine resource use and costs in procedures that require formal controlled clinical studies (2.77%). The reports of ADRs to Shuanghuanglian, Qingkailing and Yuxingcao injections were the most in all reports for TCIMs (more than 200 articles for each injections, accounting for 41.95% of the total). The four kinds of TCIMs (Shuanghuanglian, Ciwuijia, Yuxingcao, Yinzihiuqiang injections) among the top 5 reported ADRs literature were removed for the market. CONCLUSIONS:Articles published on TCIMs ADRs increased year by year, but it is necessary to enforce safety re-evaluation of TCIMs and to promote the clinical rational use.

A TOOL FOR COST-MINIMIZATION STUDIES IN ANESTHESIA IN COLOMBIA

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OBJECTIVES: The number of surgical procedures that require anesthesia and the cost of anesthesia continues rising, in many cases influenced by the use of newer and more expensive anesthetics. Our aim was to develop a tool to assess the costs and resource use in anesthesia in Colombia. METHODS: An excel tool to calculate the resource use and costs of medications used for anesthesia was developed. Costs were derived from the hospital pharmacy in a third level institution in Bogota, Colombia, and validated with other reliable sources. The model is capable of simulating the resource use and costs associated with specific procedures. It uses the subject’s age, sex, weight and height as variables to determine the dosages of the different drugs, as well as the time estimated for the procedure to determine resource utilization. Finally, the costs are calculated based on the previous variables and the specific anesthetic technique selected, identifying the different combinations of drugs, equipment, and adding a waste factor for the inhalation anesthetics. RESULTS: The 2 most common surgical procedures performed under general anesthesia in the institution were laparoscopic cholecystectomy and laparoscopic hysterectomy, were selected for the simulation using common forms of anesthetics: balanced analgesic-based, balanced hypnotic-based. Each one of these forms of anesthesia uses a different set of drugs and dosages, and they could be used interchangeably according to the anesthesiologist’s preference in most cases. The results of the simulations showed that the resource use and the total cost of the anesthesia provided varied across these three forms, depending mainly on the length of the procedure and the patient’s characteristics. CONCLUSIONS: The use of tools to determine resource use and costs in procedures that require anesthesia may help physicians and decision makers to compare interchangeable forms of anesthesia to optimize their resources.

AN ECONOMIC EVALUATION OF FIBRIN SEALANTS USED DURING INCISIONAL HERNIA WITH DERMOLIPECTOMY PROCEDURES IN SPAIN

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OBJECTIVES: Fibrin sealants (FS) are used during surgical procedures to achieve hemostasis, as sealants and to adhere tissues or implants to tissue. Because of added costs FS are not used in every procedure that could benefit from the average costs of incisional hernia procedures with and without use of FS. METHODS: Spanish cost data were applied to results from a prospective, randomized controlled trial of sixty patients undergoing incisional hernia with dermolipectomy treated with FS (Tisseel, Baxter Healthcare) or no FS (controls). Data obtained from the clinical study included: Use of FS, prophylactic antibiotics and antithrombotics, duration of hospital stay, postoperative morbidity, need for blood transfusions and hernia recurrence. The study compared the average cost per surgery in both groups, the incremental cost for FS and the average costs for treatment of adverse events (AE) attributed to the surgery. RESULTS: Based on reported resource use the average costs per incisional hernia case were calculated as €7,284 and €7,424 for surgeries with and without FS use, respectively. The major cost driver was differences in hospitalization length between the treatment arms. Costs were calculated during 36 months and costs still found FS to be cost-saving. Significant differences in hematoma rates and blood transfusions increased the average costs per surgery by €1,777 and €432.20 in the control group, respectively. The cost of FS represented 2.5% of total costs in active treatment. These results are only applicable to Spain since there are countries with similar clinical outcomes and costs structures. Though, this model can easily be adapted as long as the cost structure differs. CONCLUSIONS: The results suggest the costs of FS in incisional hernia may be offset by reduced ancillary surgical costs and shorter hospitalization periods. Future prospective randomized studies collecting more detailed resource use data are necessary to validate these findings.

ADVERSE DRUG REACTIONS OF 33 VARIETIES OF TRADITIONAL CHINESE MEDICINE INJECTIONS ON THE NATIONAL ESSENTIAL MEDICINES LIST (2004 EDITION) OF CHINA: AN OVERVIEW ON PUBLISHED LITERATURES

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OBJECTIVES: We conducted a literature review on the adverse drug reaction(ADR) of 33 variety of traditional Chinese medicine injections(TCIMs) on the national essential medicines list (2004 edition). METHODS: We electronically searched three major Chinese Databases(CBM, CNKI, VIP) since their inception to end-April, 2009. We also retrieved the websites of Ministry of Health and State Food and Drug Administration as well as Newsletter of Chinese Adverse Drug Reactions (issue 1 to 22). We descriptively analyzed the TCIMs ADR literatures. RESULTS: Among 5405 citations searched, only 1010 studies met the eligible criteria. The total and cumulative amounts of included articles about TCIMs ADRs significantly increase over time. The included 1010 articles were scattered among 173 periodicals, including 53 journals on pharmaceutical, medical or nursing, 324 articles (39.34%) and 16 more articles (4.15%) on traditional Chinese medicine. The years of publication were scattered among 297 periodicals, including 53 journals on pharmaceutical, medical or nursing, 324 articles (39.34%) and 16 more articles (4.15%) on traditional Chinese medicine. The years of publication were scattered among 297 periodicals, including 53 journals on pharmaceutical, medical or nursing, 324 articles (39.34%) and 16 more articles (4.15%) on traditional Chinese medicine.

SIDE EFFECTS ASSOCIATED WITH PRESCRIPTION OF METHYLPHENIDATE IN TAIWAN

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OBJECTIVES: Attention-deficit/hyperactivity disorder (ADHD) is a common mental illness of childhood, and the methylphenidate (MPH) is the most use and effective drugs in treating ADHD. Some recent studies found long-term use of MPH could cause side effects (SE) such as cardiovascular disease, mental illness, and substance abuse. This study focused on the pharmacological treatment of ADHD using MPH, and to evaluate the relationship between MPH and potential SE specifically on above three diseases. METHODS: The data source was the overall ADHD patients’ cohort during 2000–2007 from a population-based dataset, the National Health Insurance Research Database, in Taiwan. Children (aged 6–18) having newly diagnosed ADHD was included from claims data between January 1, 2001 and December 31, 2006. Newly diagnosed patient was identified as no diagnosed record before 12 months since initial ADHD diagnosed and data on SE were collected during the 12 months after each patient’s initial ADHD diagnosed. These patients were divided into two groups according to whether they were using MPH or not. RESULTS: We captured 61,878 new diagnosed cases (27,656 cases in MPH group, 34,222 in non-MPH group) during the study period. The Cox proportional hazards model analysis demonstrated that the new diagnosed cases (27,656 cases in MPH group, 34,222 in non-MPH group) during the study period. The Cox proportional hazards model analysis demonstrated that the new diagnosed cases (27,656 cases in MPH group, 34,222 in non-MPH group). HR of diagnose for mental illness such as oppositional defiant disorder (HR = 1.737, 95% Cl 1.523–2.974) and for cardiovascular disease and substance abuse, but may have potential side effect of some mental illness such as oppositional defiant disorder and anxiety disorders.

MENTAL HEALTH – Clinical Outcomes Studies