TREATMENT OF GUILLAIN-BARRÉ SYNDROME IN A UNIVERSITY-IMMUNOGLOBULIN AND PLASMA EXCHANGE THERAPIES FOR THE COST-EFFECTIVENESS ANALYSIS OF INTRAVENOUS

It was easier. The patients prefer to take less quantity of tablets; the switches of dosage are easier.

In São Paulo's state, the quantities reimbursed in 2007 for entacapone were 1,431,692 tablets. A one-way sensitivity analysis was performed. RESULTS: In São Paulo’s state, the quantities reimbursed in 2007 for entacapone were 1,431,692 for all levodopa/carbidopa/entacapone combinations and 8,765,930. Considering the prices used in São Paulo’s bidding, the total expenses was US$4,217,586. In this scenario, levodopa/carbidopa/entacapone FDC is used in the place of free dosage combinations, then the total of expenses was estimated in US$3,771,147. The sensitivity analysis on cost variables in an interval of ±20% was robust with the base analysis.

CONCLUSIONS: This budget impact analysis showed a potential economy of US$446,438 if levodopa/carbidopa/entacapone FDC is incorporated in São Paulo's public reimbursement system. Besides, the use of FDC can provide further adherence of patients to the treatment, once it is easier administrating one tablet instead of two or more; the patients prefer to take less quantity of tablets; the switches of dosage are easier.

RESPIRATORY-RELATED DISORDERS – Cost Studies

COST-EFFECTIVENESS ANALYSIS OF INTRAVENOUS IMMUNOGLOBULIN AND PLASMA EXCHANGE THERAPIES FOR THE TREATMENT OF GUILLAIN-BARRE SYNDROME IN A UNIVERSITY-BASED HOSPITAL IN THE SOUTH OF BRAZIL

OBJECTIVES: Compare the cost-effectiveness of two distinct therapies, Intravenous Immunoglobulin (IVIg) and Plasma Exchange (PE) in the treatment of Guillain-Barré Syndrome, concerning the public health care system. METHODS: A cross-sectional, economical analysis was conducted, including patients treated for GBS in the period from June, 2003 through June, 2008 in a public university affiliated hospital in south Brazil. The cost-effectiveness of the use of IVIg and PE in such patients was studied through the cost minimization method, considering medical costs only (albumin, IVG supplies, professional, hotel and capital costs; 2008 prices). Data were collected by chart reviews. RESULTS: The total treatment cost for PE in a single patient was USD6,058.85 (±1,701.78 SD), and the same expense for IVIg was USD18,454.57 (±2,259.56 SD) (p = 0.035). Total inpatient cost was USD5,729.79 (±11,714.54 SD) in the PE group, and USD34,768.16 (±27,766.01 SD) (p = 0.303) in the IVIg group. The main clinical outcome improvement was in the 7-point disability scale. The median of that measure in patients admitted with a severity grade 3 treated either with PE and IVIg was the same.

Secondary outcomes, such as in-hospital stay, ICU stay, and number of days on mechanical ventilation revealed no statistically significant differences between treatments. CONCLUSIONS: As the mean expenses of both therapeutic options are compared, one clearly stands out as less onerous. We concluded that, in a public university affiliated hospital, plasma exchange is more cost-effective than intravenous immunoglobulin.

RESPIRATORY-RELATED DISORDERS – Clinical Outcomes Studies

TOBACCO AND INCOME LEVEL: A SYSTEMATIC REVIEW AND META-ANALYSIS

OBJECTIVES: The association between income level (IL) and tobacco consumption, and its consequences, varies over time and between regions of the world. The aim of this study was to assess this association. METHODS: We included observational studies, published in the last 20 years, with direct assessment of IL. We searched in the main literature databases, conferences index, tobacco control agencies, and contacted experts. Two independent researchers screened titles and abstracts (agreement >0.9). The full text of selected studies and its risk of bias (using a STROBE-based checklist) were assessed by two researchers. One reviewer extracted data, and a second one checked it. Disagreements were solved by consensus. We performed a random effects meta-analysis based on adjusted ORs using Stata 9.0. We performed pre-planned subgroup and sensitivity analysis to evaluate heterogeneity (I2 > 50%) by calendar decade, continent, WHO region, country standardized mortality rate, risk of bias, gender, and age. RESULTS: Out of 9375 references we finally included 137 articles (86% cross-sectional studies). A total of 125 papers (N = 31,146,096 subjects) reported smoking prevalence, being higher among people with Low-IL than High-IL (OR: 1.48, 95%CI 1.38–1.59). This finding was marked especially after the ’90s decade except for the Eastern Mediterranean Region. Considering only studies with the three IL categories, a gradient was observed (for both genders): Low-IL vs. High-IL: OR 1.34 (1.39–1.72), and Middle-IL vs. High-IL: 1.23 (1.16–1.33). Twenty studies showed 20% of tobacco household expenditures was 10.7%, 3.7%, and 1.8% in Low-IL, Medium-IL and High-IL respectively. CONCLUSIONS: This meta-analysis confirmed and quantified an inverse relationship between IL and smoking prevalence and consequences.

RESPIRATORY-RELATED DISORDERS – Cost Studies

BUDGET IMPACT ANALYSIS OF INTRODUCTION FLUTICASONE/PROPIONATE/SALMETROL (500/50 MG) INTO THE BRAZILIAN NATIONAL DRUG FORMULARY

OBJECTIVES: To estimate of budget impact of introduction Fluticasone/salmeterol combination to treatment of Chronic Obstructive Pulmonary Disease (COPD) in the Brazilian National Drug Formulary. METHODS: We used the PLATINO Survey to estimate the number patients with moderate, severe and very severe stages of COPD and GOLD recommendations to estimate the medication costs of change in São Paulo Province. We used the cost-effectiveness results of our therapeutic options: usual care (UC), long-acting anticholinergic drug, Tiotropium (TIO); long-acting beta-agonist, Salmeterol (SAL); and Fluticasone/Salmeterol (SERETIDE®). The measure effectiveness was the exacerbations. The perspective was the Brazilian Public Health Care System (SUS). We calculated it for four scenarios. A one-way sensitivity analysis was performed. RESULTS: The additional costs incorporation of fluticasone/salmeterol (SERETIDE®) in SUS were between US$70,438 and US$35 millions. The best scenario (2%) was 20% patients in usual care and 80% in Fluticasone/salmeterol (SERETIDE®). In sensitivity analysis some parameters (price, effectiveness) were changed and the scenario 2 remains the best. In this scenario occurred in the incremental cost per patient was US$2,21 and incremental cost per reduction exacerbation was US$43,13. If we analysed only medication costs the incorporation is cost saving (US$9 millions). CONCLUSIONS: SERETIDE® offers the protection against exacerbations at low compared with TIO. If all costs are computed is needed an incremental budget of US$2,21 per patient. Their incorporation is cost saving and can to extend the pharmacotherapy to more patients. The results showed the need of guidelines to assure the best resource allocation.

A MICROSIMULATION ECONOMIC MODEL TO EVALUATE THE DISEASE BURDEN ASSOCIATED WITH SMOKING IN ARGENTINA

OBJECTIVES: To perform a comprehensive evaluation of tobacco-related disease burden in Argentina, including both its health effects and its economic impact. METHODS: A first order Monte Carlo, or probabilistic microsimulation of individual patients was built, incorporating the natural history, costs and quality of life impact of all the tobacco-related adult diseases: coronary and non-coronary heart diseases, cerebrovascular diseases, COPD, pneumonia/influenza, lung cancer as well as 9 other neoplasms. Systematic searches were performed in bibliographic database, grey literature and experts. RESULTS: The model showed adequate internal validity, with all simulated events rates falling within ±10% of the source publications. R2 between predicted and observed values ranged from 0.758 to 0.999. Third order validation showed an excellent correlation between published data and model results. Health conditions related to smoking were responsible of 129,630 annual deaths in Argentina, 25% of them (32,167) attributable to tobacco. The annual costs for the country were of about $9.5 billion pesos (Argentinean pesos, 2006), smoking being responsible for 34%. Male smokers lost 3.5 years of life expectancy as compared to their non-smoking counterparts. A total of 721,285 total annual DALYs were attributable to tobacco, among which the main conditions were cardiovascular disease, lung cancer and COPD. Premature deaths accounted for three quarters of DALYs. CONCLUSIONS: These results confirm the local relevance of smoking as an important health and economic burden in our country. They may be of great importance as strategic inputs for decision-makers, facing the ratification of the Framework Convention on Tobacco Control goals.