ECONOMICAL EVALUATION OF DIFFERENT FORMS OF BETAHISTINE IN PATIENTS WITH VERTIGO

Method:
An open-labeled prospective multicenter randomized study was performed in 14 outpatient clinics of Russia. The duration of a study was 30 days. Patients with vertigo were treated with three forms of betahistine (Betaserc, Betaver, and Vestibo) in combination with any other medications with the discretion of investigator. The effectiveness criteria were proportion of patients with absence of moderate and severe functional disorders (according to International Classification of Functioning, Disability and Health) and increase of patients’ quality of life rate compared to the initial one. (A total of 33 QoL questionnaires were calculated). Cost-effectiveness analysis was performed by measuring the costs and cost-utility ratios. RESULTS: In Betaserc group (8,088.57) compared to Betaver (10,358.17) and Vestibo groups, the cost-effectiveness ratio according to the criteria “the increase of quality of life rate and the quality of life after the treatment was 19.53, 19.62 and 19.67, respectively.” The proportion of patients without absence of moderate and severe functional disorders up to the end of a study was 54% in Betaver group, 57% in Vestibo group and 69% in Betaserc group. The average difference between initial quality of life rate and the quality of life after the treatment was 19.53, 19.62 and 22.79 (Betaver, Vestibo and Betaserc groups accordingly). Cost of treatment was measured by the cost-effectiveness ratio according to the criteria “the proportion of patients with absence of moderate and severe functional disorders” was minimal in Betaserc group (8,088.57) compared to Betaver (10,358.17) and Vestibo (8,955.49) groups. The cost-utility ratio according to the criteria “the increase of patients’ quality of life rate compared to the initial one” was also minimal in Betaserc group (244.89) compared to Betaver (286.4) and Vestibo (260.17) groups. CONCLUSIONS: Betaserc seems to be more clinically and economically effective betahistine compared to another two medications in treatment of patients with vertigo.

COST SAVING OPPORTUNITY OF POTENTIAL PHARMACIST-INITIATED IV-TO-PO LEVETIRACETAM SWITCHES: A PREDICTION MODEL BASED ON REAL-WORLD DATA

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Objectives: Opportunity exists for hospitalized patients to appropriately receive the prescribed levetiracetam given its bioavailability of 100%. Use of IV levetiracetam in an outpatient setting was hypothesized to be a cost-saving opportunity and to project cost savings of potential pharmacist-initiated IV-to-PO levetiracetam switches.

Methods: A retrospective medical chart review on 100 randomly selected adult patients receiving at least two doses of IV levetiracetam during hospital stays between July 1, 2008 and November 30, 2008 was conducted. Pre-defined eligibility of IV-to-PO levetiracetam switches, costs, doses and frequencies were obtained for each patient-day. Only levetiracetam costs were considered and presented as 2008 average wholesale prices without further adjustments. Monte Carlo simulation models were created to predict cost savings, and model inputs, parameters and plausible ranges were determined based on real-world data. Three scenarios were hypothesized where switches could have been made with “no delay,” “12-hour delay” or “24-hour delay” of pharmacist interventions upon identification of eligibility. Probabilistic sensitivity analysis was performed (1,000 trials) for each scenario. RESULTS: Among 729 patient-days (from 99 subjects with one subject excluded as an outlier), 6.6% made IV-to-PO levetiracetam switches and additional 66% were eligible for such switch. With a conservative scenario of 24-hour delay, potential cost savings were estimated as follows: mean $112 (SD $714) per patient- day; median $802 (95% CI $21-5,661) per patient. Of 2,500 estimates, 19.6% could have potential savings of $100–200 per patient, followed by $0–$100 (15.5%), $200–$300 (14.6%) and $300–$400 (9.6%). CONCLUSIONS: Pharmacists have potential cost saving opportunities by identifying eligibility of IV-to-PO levetiracetam switches.

ECONOMIC EVALUATION OF THE IMPACT OF MMNT ON TIME TO NURSING HOME ADMISSION IN THE TREATMENT OF ALZHEIMER’S DISEASE

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OBJECTIVES: An observational study recently showed that combining memantine with a cholinesterase inhibitor (ChEI) treatment significantly delayed admission to a nursing home in patients with Alzheimer’s disease. The objective of this analysis was to evaluate the economic impact of the concomitant use of memantine and ChEI in time to institutionalization in a Canadian population. METHODS: A cost-utility analysis using a Markov model over a 7 years horizon was performed according to a public third party perspective and a societal perspective. The Markov model includes the following states: non-institutionalized, institutionalized, and deceased. Transition probabilities for institutionalisation were taken from the study by Lopez et al., while transition probabilities for death were taken from Canadian survival tables and adjusted for mortality rates specific to Alzheimer’s disease. For the publicly funded health care system perspective, costs were those of the health care system, while for the health care system perspective, the concomitant use of a ChEI and memantine is a dominant strategy over the use of a ChEI alone. Thus, the costs associated with the use of memantine in combination with a ChEI are lower than those associated with the use of a ChEI alone, and the number of Quality-Adjusted-life-years (QALYs) gained with the ChEI plus memantine is a cost-effective alternative compared to the use of a ChEI alone, both from a health care and societal perspective.