ECONOMICAL EVALUATION OF DIFFERENT FORMS OF BETAHistine in PATIENTS with VERTIGO

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OBJECTIVES: to perform economic evaluation of three forms of betahistine in patients with vertigo. METHODS: an open-labeled prospective multicenter randomized study was performed in 14 out-patient clinics of Russia. The duration of a study was 30 days. Patients with vertigo were treated with three forms of betahistine (Betaver, Betaserc, Vestibo) in combination with any other medications with the decision 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. The cost-effectiveness ratio according to the criteria “the proportion of patients with absence of moderate and severe functional disorders” was nearly similar in all groups. 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 (9,553.49) groups. The cost-utilty ratio according to the criteria “the increase of patients’ quality of life rate compared to the initial one” was also minimal in the Betaserc group (244.89) compared to Betaver (286.4) and Vestibo (260.17) groups. CONCLUSIONS: 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) obtained with a ChEI plus 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 to treat Alzheimer’s disease is a cost-effective alternative compared to the use of a ChEI alone, both from a health care and societal perspective.

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 certificated pharmacists to appropriately recognize and intervene in IV-to-PO levetiracetam switches given its bioavailability (IV) levetiracetam at our institution had increased and was associated with significant annual cost. This study aimed to evaluate the use of IV levetiracetam, to identify a cost saving opportunity and to project cost savings of potential pharmacist-initiated IV-to-PO levetiracetam switches. The goal was to provide information regarding medication utilization and cost saving opportunities for hospital administration to make informed formulary decisions. 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, medication 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 (2,500 trials) for each scenario. RESULTS: Among 729 patient-days (from 99 subjects with one or more, 369.60 (SD $50.4) per patient-day; median $382 (95% CI $261-$561) 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 identification of eligible IV-to-PO levetiracetam switches.

ECONOMIC EVALUATION OF THE IMPACT OF MEMANTINE 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 healthcare system perspective, costs of care before and 3 months before (baseline) and 24 months after the index date were considered. In addition, the costs of care provided in the community and in nursing homes were considered. For the societal perspective, costs of direct care and supervision provided by caregivers were added. RESULTS: From both a societal and a publicly funded healthcare 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) obtained with a ChEI plus memantine is higher than the number of QALYs obtained with a ChEI alone. CONCLUSIONS: The results of this economic evaluation indicate that the use of memantine combined with a ChEI to treat Alzheimer’s disease is a cost-effective alternative compared to the use of a ChEI alone, both from a health care and societal perspective.

IMPACT OF MEDICATION ADHERENCE TO DISEASE-MODIFYING DRUGS ON SEVERE RELAPSE, AND DIRECT AND INDIRECT COSTS AMONG EMPLOYEES WITH MULTIPLE SCLEROSIS

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OBJECTIVES: Compare health status, resource utilization, and work productivity for caregivers for an adult with epilepsy and a control group of non-caregivers. METHODS: Respondents to the 2009 U.S. National Health and Wellness Survey (NHWS), a self-administered, internet-based questionnaire of adults, who reported providing care for an adult relative with epilepsy, were included in the caregiver group. Propensity score methods were used to construct a 1:1 matched control group from the general NHWS population, excluding caregivers for any other condition, matched on demographics and health characteristics. The caregiver and control groups were compared on health status (SF-12v2 Physical Component Summary (PCS) and Mental Component Summary (MCS) score) and resource use (number of self-reported hospitalizations, ER visits, and physician visits in the past 6 months). Employed caregivers were similarly matched to employed controls from the general NHWS respondents and compared on work productivity using the Work Productivity and Activity Impairment (WPAI) questionnaire. Statistical analyses included chi-square tests, t-tests, and generalized linear models. RESULTS: Of the 75,000 NHWS respondents, 222 self-reported caregivers were matched to 1,110 controls (p < 0.025 for all included covariates). The caregiver group was 51.8% female with mean (standard deviation) age of 45.2 (15.4) years. Caregivers had lower mean SF-12v2 PCS scores than controls (43.0 vs. 46.3, respectively; p < 0.0001) and showed no difference on mean MCS scores (44.8 vs. 46.3, respectively; p = 0.090). Caregivers reported significantly (p < 0.0001) more ER visits (rate ratio (RR) = the ratio of the caregiver group mean = 4.15), hospitalizations (RR = 6.44), and provider visits (RR = 1.59) than controls. Employed caregivers (n = 124) reported significantly (p < 0.018) higher rates of absenteeism (RR = 2.66), presenteeism (RR = 2.08), overall work impairment (RR = 2.02), and activity impairment (RR = 4.76) versus controls. CONCLUSIONS: Caregivers of adults with epilepsy reported utilizing more health care resources, and had lower work productivity, worse physical health status yet no difference in mental health status versus non-caregivers.

NEUROLOGICAL DISORDERS – Patient-Reported Outcomes Studies

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Abstracts