COST-EFFECTIVENESS ANALYSIS OF SINGLE-DOSE EXTENDED RELEASE METHYLPHENIDATE (CONCERTA®) VS. ATOMOXETINE AND SHORT-ACTION METHYLPHENIDATE, FOR THE MANAGEMENT OF ATTENTION DEFICIT DISORDER WITH HYPERACTIVITY IN MEXICO

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OBJECTIVES: To estimate the cost-effectiveness of the single-dose extended release Methylphenidate vs the multi-dose immediate release Methylphenidate and single-dose Atomoxetine for the management of ADDH in Mexico. METHODS: A cost-effectiveness analysis was developed, under a decision model. The cost-effectiveness ratio was estimated for extended release methylphenidate compared to other drug alternatives. A retrospective analysis was made of all patients seen at the IMSS (Mexican Institute of Social Security) during 2004, with diagnosed ADDH. Patient cohorts were derived from IMSS database, and they were used as an analysis pattern for each therapeutic alternative. In order to determine the effectiveness rates for each drug, and to obtain the “clinical outcomes”, a meta-analysis of national and international literature was made. To compare the effectiveness, the ADHD-RS/Total, ADHD-RS/Hyperactivity, CPRS-R/Inattention/Overactivity and CPRS-R/Opposition-Challenge scales were used. A comparison was also made of all reported adverse events. A decision tree was utilized, based on its care, and the costs were determined for each node. Costs for drug therapy, specialty ambulatory consultations in pediatrics, neurology, and psychology, hospitalization, time spent in hospitals, laboratory and office tests, and labor productivity were considered.

RESULTS: The extended release methylphenidate OROS attained the most significant results regarding health care measures. As for the ADHD-RS Total score, it showed a difference in improvement of almost 34%, compared to Methylphenidate IR, and almost 59% compared to Atomoxetine. The extended release methylphenidate OROS (CONCERTA®) leads to savings of $3213 for hospitalization days avoided, and it is the most cost-effective and cost-saving strategy, compared to Methylphenidate IR and Atomoxetine.

CONCLUSION: Extended release methylphenidate OROS is an efficient, cost-effective, and cost-saving alternative compared to Methylphenidate IR and Atomoxetine.

COST-EFFECTIVENESS ANALYSIS OF GALANTAMINE (REMINYL ER) IN THE TREATMENT OF MILD TO MODERATE DEMENTIA OF THE ALZHEIMER’S TYPE IN MEXICO

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OBJECTIVES: To estimate the cost-effectiveness of Galantamine in the extended release formulation for the management of Alzheimer’s Disease (AD) versus other acetylcholinesterase inhibitors (Donepezil, Rivastigmine and Galantamine immediate release formulation) in Mexico. METHODS: A decision analysis was developed using a cost-effectiveness study, based on a Markov model, in order to understand the different stages of the disease over a period of 48 months. The databases of the Mexican Social Security Institute (IMSS) were consulted in a retrospective manner and a cohort of patients was used to determine the consumption of resources. The factors taken into consideration were: specific pharmacological therapy, outpatient consultation in family practice and specialty units, hospital stays, number of days hospitalized, emergency care and laboratory tests. To determine the effectiveness of each of the medications, a meta-analysis was carried out to compare clinical outcomes according to the ADAS-cog and CIBIC-plus scales. The different parameters of effectiveness were included in the model and consumption of resources also, with each therapeutic formulation.

RESULTS: Galantamine ER was the alternative with the lowest annual cost of treatment, both in the highest recommended dose range ($43,162 pesos) as well as the lowest dose range ($28,214 pesos). Galantamine ER produced savings of $18,314 pesos in the highest dose range and $6789 pesos in the lowest dose range versus Donepezil. Galantamine ER produced savings of $76,230 pesos and $20,274 pesos (highest and lowest recommended dose ranges, respectively) versus Rivastigmine; and $23,033 pesos and $18,559 pesos versus Galantamine IR. Galantamine ER revealed the lowest number of days hospitalized/year, a situation that is extremely relevant for the National Health care Institute. CONCLUSION: Galantamine ER is a dominant cost-efficient and cost-saving alternative for the management of Alzheimer patients in Mexico.

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