THE COST-EFFECTIVENESS OF INSULIN GLULISINE IN TYPE 2 DIABETES IN POLAND

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OBJECTIVE: To determine the relative cost-effectiveness of insulin glulisine versus other rapid- and short acting insulins in patients with Type 2 (T2DM) diabetes applied in a Polish setting. **METHODS:** Treatment effects were extracted from identified RCTs assessing the effects of insulin glulisine in patients with diabetes. The analysis was performed from the health care payer (Polish NHF and patient) perspective, with a time horizon of one year. Cost-utility analysis (CUA) was performed for the comparison of insulin glulisine and regular human insulin (RHI). In the absence of significant difference in clinical effectiveness, cost-minimization analysis (CMA) of insulin glulisine versus other analogs (lispro, aspart) was chosen. A range of sensitivity analyses were performed to account for uncertainty in input parameters. **RESULTS:** 1) CUA: insulin glulisine was associated with increased QALYs (0.0044) resulting from reduction in nocturnal hypoglycaemia episodes, and higher costs (181 PLN per patient) compared with RHI, with the ICER of 41,385 PLN per QALY gained. The ICERs were most sensitive to the change in the number of nocturnal hypoglycaemia episodes, and 2) CMA: the cost of insulin glulisine treatment was lower than that of lispro and aspart (with the 1 year difference of 77PLN and 278PLN, respectively). **CONCLUSION:** Results of the analysis indicate that insulin glulisine is likely to represent a good value for money in the treatment of type 2 diabetes in Poland.

COST-EFFECTIVENESS ANALYSIS OF DOPAMINE AGONISTS FOR THE TREATMENT OF INFERTILITY ASOCIATED TO HYPERPROLACTINEMIA IN MEXICO

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OBJECTIVE: An excess of prolactin above 25 ng/mL (hyperprolactinemia) can be identified in up to 10% of the population and in women is cause of infertility. The purpose of the study was to model the economic and health consequences of cabergoline, bromocriptine and the sequential therapy (ST) (defined as the treatment initiated with bromocriptine followed by cabergoline) in the management of women with hyperprolactinemia who desired to be pregnant from the health care payer's perspective. **METHODS:** A cost-effectiveness analysis was developed using a Bayesian decision-tree model. The model simulates costs and effectiveness outcomes in a 31-months period. Effectiveness measure was the percentage of women who got pregnant during the analysis period. The comparators were cabergoline (0.5 mg twice a week), bromocriptine (5 mg/24 hrs) and sequential therapy. Resource use and cost data were obtained from hospital records of patients (between 20–40 yrs old who previously told their intention to get pregnant) being treated at a third-level hospital within the Social Security Institute for State Workers (ISSSTE) in Mexico City (n = 18). Effectiveness data and model transition probabilities were obtained from international published literature. Costs and health outcomes were discounted using a 3% annual rate. The decision-tree model was calibrated according to international guidelines. One-way and probabilistic sensitivity analyses were performed using Monte Carlo Simula-

tion first-order approach. **RESULTS:** Patients who received ST experienced more effectiveness (43%) compared with patients treated with cabergoline (40%) and bromocriptine (26%). Mean costs per patient were higher with cabergoline (US$5027 ± 500) compared with ST (US$4356 ± 774) and bromocriptine (US$3955 ± 769). The ICERs using bromocriptine as baseline treatment, were US$2367 ± 506 and US$7443 ± 6376 for ST and cabergoline, respectively. Sensitivity analyses showed that cabergoline could be a cost-saving therapy reducing its price in 18% (p < 0.05). **CONCLUSION:** In Mexico, ST demonstrated to be a cost-effective strategy for the treatment of infertility associated to hyperprolactinemia in women who want to get pregnant.

PHARMACOECONOMIC EVALUATION OF CABERGOLINE FOR THE MANAGEMENT OF HYPERPROLACTINEMIA CAUSED BY HYPOPHYSEAL MICROADENOMA IN MEXICO

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OBJECTIVE: Hyperprolactinemia is a clinical condition characterized by consistent elevation of plasmatic prolactin levels above 25 ng/mL. The aim of this analysis was to estimate the cost-effectiveness ratios of cabergoline, bromocriptine and the sequential therapy (defined as the treatment initiated with bromocriptine followed by cabergoline) in patients with hyperprolactinemia caused by hypophyseal microadenoma within the Social Security Institute for State Workers (ISSSTE). **METHODS:** A cost-effectiveness analysis was developed using a Bayesian decision-tree model from the Mexican payer's perspective. The model simulates costs and effectiveness in a 31-months period. Effectiveness measure was the number of months with prolactin levels controlled. Efficacy data and model transition probabilities were obtained from international literature. The comparators were cabergoline (0.5 mg twice a week), bromocriptine (5 mg/day) and sequential therapy. Resource use data and cost were obtained from hospital records of patients being treated at a third-level hospital from ISSSTE in Mexico City (n = 43). Costs and health outcomes were discounted using a 3% annual rate. One-way and probabilistic sensitivity analyses were performed using the Monte Carlo Simulation first-order approach. **RESULTS:** Cabergoline, yielded 27.9 months of patients with prolactin levels controlled followed by the sequential therapy with 20.3 months and bromocriptine (17.7 months). The mean treatment costs were US$5046 ± 504 for cabergoline; US$4341 ± 789 for the sequential therapy and US$3937 ± 785 for treatment with bromocriptine. ICERs estimated using bromocriptine as the baseline treatment were US$103 ± 89 and US$151 ± 32 for cabergoline and sequential therapy, respectively. Based on the one-way sensitivity analysis, cabergoline strategy could be a cost-saving therapy with a reduction of 27% in its price. Probabilistic sensitivity analyses showed that carbergoline was the treatment more cost-effective (p < 0.05). **CONCLUSION:** In Mexico, cabergoline treatment was the most cost-effective alternative because of its higher number of months with prolactin levels controlled and surgeries avoided. These results should be taken into account by Mexican health professionals in the management of hyperprolactinemia.