COST-UTILITY ANALYSIS OF ROTIGOTINE TRANSDERMAL PATCH IN EARLY-STAGE PARKINSON’S DISEASE IN SCOTLAND

Benholdt H, Gunn A
UCB Pharma S.A, Brussels, Belgium

OBJECTIVES: To evaluate the cost-effectiveness of rotigotine transdermal patch as monotherapy in early-stage Parkinson’s disease (PD) compared to ropinirole and other dopamine agonists (DA) from the NHS perspective in Scotland. METHODS: A decision-analytic model was developed, based on the use of an early-stage PD patient (Hoehn and Yahr-stage 2); treatment arms were ropinirole, rotigotine, and DA practice comparator including ropinirole, cabergoline and pramipexole. 5-year and 10-year time horizons were considered for all patients who remained on monotherapy only. The economic evaluation is a cost-utility analysis with health outcomes expressed in Quality Adjusted Life-years (QALYs) gained in 2006. Costs relating to drug acquisition, PD severity, falls, occurrence of motor complications and other complications were included. Adverse events and co-morbidities were considered in the model. Efficacy and safety data were estimated with meta-analysis. The quality of life was measured using EQ-5D. Data on medical resource use was obtained via expert interviews and literature review. Costs and outcomes of treatment were discounted at the rate of 3.5%. RESULTS: After 5 years, treatment with rotigotine transdermal patch resulted in an estimated 2.30 QALYs, slightly higher than with ropinirole (2.26) and the DA practice comparator (2.27). 10-year outcomes were 3.22, 3.17 and 3.17 QALYs for rotigotine, ropinirole and DA practice comparator, respectively. Total costs for rotigotine, ropinirole and DA practice comparator were £34,748, £37,694 and £36,459 respectively after 5 years and £79,477, £84,120 and £81,631, respectively after 10 years. With a willingness-to-pay of £20,000 per QALY gained, there is a 90% probability that rotigotine is cost-effective relative to ropinirole, and a 85% probability of cost-effectiveness relative to the DA practice comparator for both 5-year and 10-year time horizons. CONCLUSIONS: Based on the model, rotigotine may be considered a dominant strategy over ropinirole and DA practice comparator in the treatment of early-stage PD at 5-year and 10-year time horizons.

COST-UTILITY ANALYSIS OF LACOSAMIDE ADJUNCTIVE THERAPY IN PATIENTS WITH EPILEPTIC SEIZURES IN SWEDEN

Simoens S, Dedeken P, De Naeyer L, Benhaddi H
COST-UTILITY ANALYSIS OF LACOSAMIDE ADJUNCTIVE THERAPY IN EPILEPTIC PATIENTS IN BELGIUM

Simoens S, Dedeken P, De Naeyer L, Benhaddi H
UCB Pharma S.A, Brussels, Belgium

OBJECTIVES: This study aims at evaluating the incremental cost-effectiveness ratio (ICER) for lacosamide compared with standard therapy alone from the perspective of the Belgian health care payer in 2010. METHODS: A decision tree simulating the treatment pathway of a hypothetical cohort of 1,000 patients over two years was split into four phases of six months each during which patients can become seizure free, experience a seizure reduction (defined as ≤50% reduction in seizures), or withdraw due to non-response. The antiepileptic drugs (AEDs) included in the standard therapy arm were extracted from the pivotal trials and included carbamazepine, lamotrigine, levetiracetam, topiramate and valproate. Health state probabilities, seizure frequency and utility values were taken from lacosamide trials or from the literature. Costs of general practitioner visits, outpatient visits, hospitalizations and emergency department visits were included. Resource use was estimated by a Belgian panel of eight neurologists. Costs were discounted at a rate of 3% and consequences at a rate of 1.5%. RESULTS: Over a 24-month period, standard AED therapy plus lacosamide led to a reduction of 7 seizures, an increase of 0.038 quality-adjusted life-years, and a cost decrease of €619 per patient as compared with standard therapy alone. Results were also calculated for a 6-, 12- and 18-month follow-up. Lacosamide plus AED therapy dominated versus standard therapy alone. Using a willingness to pay of €30,000 per quality-adjusted life-year, the net monetary benefit of standard antiepileptic drug therapy plus lacosamide amounted to €4,754. The probability of standard AED therapy plus lacosamide being cost-effective was 97.3% at 6 months, 99.8% at 12 months, 99.9% at 18 months, and 100% at 24 months. CONCLUSIONS: In epileptic patients who are difficult to treat with other AEDs, standard AED therapy plus lacosamide appears to be a cost-effective alternative.