COST-EFFECTIVENESS OF APREPITANT IN PATIENTS RECEIVING ANTIEMETIC PROPHYLAXIS FOR HIGHLY EMETOGENIC CHEMOTHERAPY IN HUNGARY

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OBJECTIVES: Chemotherapy-induced nausea and vomiting (CINV) remains a major adverse effect of cancer therapy. We aimed to determine outcomes and cost-effectiveness associated with use of aprepitant in patients undergoing cisplatin based chemotherapy in Hungary from a patient’s and payer’s perspective. METHODS: A global decision-analytic model was adapted in Hungary which compared an aprepitant regimen (aprepitant/ondansetron/dexamethasone) to a control regimen (ondansetron/dexamethasone) over a five days period. Clinical results observed in aprepitant phase III clinical trials, and utility data came from published literature were assigned Hungarian resource utilisation and unit cost data. RESULTS: Complete responders over one chemotherapy cycle was observed in 71.9% of patients in the aprepitant group compared to 59.9% of patients in the control group. Total cost per patient in aprepitant and control group was €259 and €5363. As the result of cost-effectiveness analyses was practically cost neutral; the incremental cost per additional responder was irrelevant (€5). Patients were estimated to have gained an equivalent of 8.25 additional hour of perfect health per three cycle (0.34 quality-adjusted life days) with aprepitant-based regimen compared to control regimen. Cost per quality-adjusted life year gained with aprepitant was estimated at €5363. CONCLUSIONS: Aprepitant-based strategy is more effective in CINV-related health outcomes in patients undergoing highly emetogenic chemotherapy. Incremental benefits materialised in a cost-effective fashion.

ECONOMIC EVALUATION OF CLODRONATE AND ZOLEDRONATE IN PATIENTS DIAGNOSED WITH METASTATIC BONE DISEASE FROM THE PERSPECTIVE OF THIRD PARTY PAYORS IN BRAZIL

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OBJECTIVES: Bisphosphonates have been shown to be effective in reducing the incidence of skeletal-related events (SREs) in patients with metastatic bone disease (MBD) originated from any type of malignancy. The purpose of this study was to evaluate the cost-effectiveness of clodronate and zoledronate in the prevention of SREs in patients with MBD. METHODS: A Markov model was developed to represent a cohort of patients diagnosed with MBD. The model had four primary health states: “without SRE”, “with SRE (i.e., pathologic fracture, radiotherapy or surgery, and hypercalcemia)”, “osteonecrosis” and “death”. Patients evaluated were those diagnosed with MBD, presenting any SRE and treated with clodronate or zoledronate. Transition probabilities originated from a meta-analysis previously published by our group. Time-horizon used was five years. Cost data were obtained from national privately-administered databases. Outcomes evaluated were costs, quality-adjusted life years (QALYs), and SRE-free years, Univariate and multivariate sensitivity analyses were used to determine robustness. Costs were reported in 2007 Brazilian Reais (1R$ = 1.60US$). RESULTS: MBD treatment total cost in Brazil (on average, per-patient) in five years (base-case) was R$49,004 with clodronate and R$53,076 with zoledronate. For both drugs, drug cost drove the overall cost of MBD management (>90%). Clodronate and zoledronate generated (on average, per-patient) 2.00 and 1.90 QALYs (5-year time-horizon), respectively. Within the same time-horizon, clodronate and zoledronate also generated (on average, per-patient) 1.81 and 1.76 SRE free-years, respectively. When clodronate and zoledronate were contrasted for cost-effectiveness, clodronate was considered dominant. Multivariate sensitivity analysis did not show changes in original results. CONCLUSIONS: Clodronate was dominant (i.e., produced higher effectiveness and lower costs) in comparison to zoledronate for preventing SREs in patients diagnosed with MBD in Brazil from the private sector perspective.