–0.67% point ($p < 0.001$) for repaglinide plus metformin and nateglinide plus metformin, respectively. Incremental cost-effectiveness showed that the repaglinide plus metformin combination was a superior healthcare strategy. The difference in QALY was 0.26 years (LYG was 0.40 years) and lifetime cost was lower, due to fewer complications. Furthermore, clinical outcomes showed that the largest contributor to lifetime costs was cardiovascular events (37%), followed by cost for drugs (31%), neuropathy (25%), retinopathy (5%) and nephropathy (2%). Sensitivity analyses support the validity and reliability of the results. **CONCLUSIONS:** The improved efficacy rate in the repaglinide plus metformin group was estimated to be a cost-effective way of treating Type 2 diabetes, as compared to a regimen of nateglinide plus metformin. Further outcomes studies are needed to support these findings.

PDB19

THE COST-EFFECTIVENESS OF TARKA FOR PREVENTING RENAL FAILURE IN TYPE 2 DIABETIC PATIENTS WITH HYPERTENSION IN THE US HEALTH CARE SETTING

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OBJECTIVE: To determine the long-term clinical and economic outcomes of combined ACE-inhibitor and calcium antagonist therapy (Tarka) versus standard care for preventing the development of end-stage renal disease in type 2 diabetic patients with hypertension and macroproteinuria in the United States. **METHODS:** Markov process analysis techniques were used to model the health economic outcomes. Probabilities, unit costs, resource utilization data and utilities were obtained from published literature, clinical trial reports, and a national database (USRDS). Progression of renal failure was measured using the rate of proteinuria as indicator. The perspective was that of the third-party payer. **RESULTS:** In the 5-year analysis Tarka yielded a 0.1 gain in QALYs when it was compared to ACE-inhibitor (4.1 versus 4.0) and 0.2 gains in QALYs compared to calcium antagonist (4.1 vs. 3.9). The lifetime model yielded a gain of 0.7 QALYs when it was compared to ACE-inhibitor (7.6 vs. 6.9) and a gain of 0.8 QALYs compared to calcium antagonist (7.6 vs. 6.8). In the lifetime analysis Tarka resulted in a 0.9 year gain in life expectancy when it was compared to ACE-inhibitor (10.1 vs. 9.2) and 1 year gain in life expectancy compared to calcium antagonist (10.1 vs. 9.1). From the payer perspective Tarka was a cost saving versus ACE-inhibitors and calcium antagonists over the five years and the life-time horizon and consequently Tarka is dominant over usual care. **CONCLUSION:** The results showed that the favourable clinical benefit of Tarka results in positive short and long-term health economic benefits.

PDB20

SIMULATING THE LONG TERM COST-EFFECTIVENESS OF A COMBINATION REGIMEN OF REPAGLINIDE PLUS ROSIGLITAZONE VS. ROSIGLITAZONE MONOTHERAPY OVER A 30-YEAR PERIOD

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OBJECTIVES: A modeling study was performed, combining available efficacy data and costs of complications to obtain projections of the long-term clinical outcomes and costs for treatment of type 2 diabetic patients using different oral antidiabetic treatment regimens. **METHODS:** Baseline data were taken from a double-blind, multicenter, randomized, parallel group study in type 2 diabetic patients treated with repaglinide plus rosiglitazone or rosiglitazone alone. Patients were previously treated with metformin or a sulfonylurea. The baseline cohort of patients was on average 57.5 years old, with a mean A1c level of 9.1%. A Monte Carlo simulation was used to project development of diabetic complications and associated costs (US Medicare perspective) over a 30-year period. Risks of macro- and microvascular complications (derived from published literature) were combined with hazard ratios for incidence of each complication, to calculate long-term clinical outcomes and lifetime costs (discounted at 3%). Lifetime costs were calculated as pharmacy plus complication costs. After dose adjustments to achieve glycemic targets, median final daily doses were 6 mg repaglinide and 4 mg rosiglitazone for combination therapy and 8 mg in rosiglitazone monotherapy. **RESULTS:** The reduction of A1c values from baseline was –1.43% ($p < 0.001$) and –0.56% ($p < 0.001$) for combination therapy and rosiglitazone, respectively. The superior A1c reductions of combination therapy resulted in an increased life expectancy of 0.56 years, while lifetime costs were equal to those of rosiglitazone. A lower incidence of cardiovascular events in the combination therapy was the principal reason for a favorable cost effectiveness of combination therapy. Consequently, the incremental cost effectiveness ratios showed that the combination therapy is dominant relative to rosiglitazone alone. Sensitivity analyses showed the results were robust. **CONCLUSIONS:** Incremental cost-effectiveness ratios showed that a regimen combining repaglinide and rosiglitazone compares favorably to rosiglitazone alone, in Type 2 diabetic patients who had failed metformin or sulfonylurea monotherapy.