EVALUATING ONE-YEAR STABILITY OF THE TOTAL ILLNESS BURDEN INDEX

OBJECTIVES: We evaluated treatment patterns, hypoglycemic events, glycemic control and medical costs for patients 60–70 years old with type 2 diabetes mellitus (T2DM) who were treated with exenatide once weekly (ExQW) vs. insulin glargine (IG). METHODS: Medical, pharmacy and lab data for commercial and Medicare Advantage enrollees were obtained from administrative claims from a large, national health plan. Subjects were identified from May 2005 to Dec 2008 with 6-month baseline and 12-month follow-up periods. Subjects with any insulin treatment during baseline were excluded. Propensity score (PS) matching (1:1) of ExQW and IG subjects was used to create balanced cohorts. Logistic regression models were used to analyze medication adherence (Medication Possession Ratio, MPR) (0–100), therapy persistence (gap of 60 days in treatment discontinuation), any acute hypoglycemic event, and glycemic control (follow-up A1C levels of < 7%). RESULTS: The final matched study sample included 3,263 subjects per cohort, average age was 65 y (SD 4.9); 48% were female; 83% were enrolled in a commercial plan. In the follow-up period, ExQW patients experienced significantly fewer hypoglycemic events compared to IG patients (15 vs. 40, p < 0.001). Subjects in the ExQW cohort were also more likely to obtain an MPR > 80% (Odds Ratio (OR) = 1.93, CL 1.72-2.17), less likely to discontinue therapy (OR = 0.28, CL 0.25-0.31) and less likely to have any acute hypoglycemic event (OR = 0.48, CL 0.26-0.88) during the follow-up period. For those with valid A1C levels in both baseline and follow-up periods (N = 669, ExQW: 93%, IG: 83%), the ExQW subjects were more likely to achieve A1C < 7% (ExQW: 62%, CL 1.11-1.25) compared to IG subjects. Associated medical costs were similar for both groups. Results were comparable for patients > 65 y. CONCLUSIONS: Older ExQW subjects were more likely to adhere to therapy and achieve A1C < 7% and less likely to discontinue therapy or experience any acute hypoglycemic event than older IG subjects.

LONG-TERM EFFECTIVENESS OF MANAGING DIABETES WITH THE CHRONIC CARE MODEL: SIMULATIONS PERFORMED USING ARCHES

OBJECTIVES: The aim of this study was to evaluate the impact of antidiabetic-induced hypoglycemia on clinical outcomes and resource utilization among veterans with type-2 diabetes mellitus (T2DM). METHODS: This retrospective cohort study used electronic medical records between 01/01/2004 and 09/01/2010 from the Veterans Integrated Service Network (VISN) 16 data warehouse. Patients were required to have at least 2 records of T2DM diabetes, at least 6 months of continuous care with a diagnosis of T2DM and data on all medications in the year before the diagnosis. Patients were included if they had a diagnosis of T2DM (ICD-9-CM diagnosis (250.xx except for 250.x1 and 250.x3)). Exclusion criteria included: any hypoglycemia event (diagnosis or measurement) during the year before the diagnosis; diagnosis of any severe hypoglycemia event (Death, poisoning, coma, severe hypoglycemia with hypoglycemia) during the year before the diagnosis. Outcomes included mortality, diabetes-related events, hospitalizations, and costs. RESULTS: Among 42,437 T2DM patients, 369 patients of the hypoglycemia cohort and 42,658 patients of the control cohort suffered in each year of the study period from severe hypoglycemia events (1.0% vs. 0.5%). The proportion of severe hypoglycemia events was 1.0% vs. 0.5% for the T2DM cohort and control cohort, respectively. CONCLUSIONS: These findings suggest that the benefits of ExQW may translate into clinically and economically meaningful reductions in long-term outcomes.

THE IMPACT OF ANTIDiABETIC-INDUCED HYPOGLYCEMIA ON CLINICAL OUTCOMES AND RESOURCE UTILIZATION AMONG VETERANS WITH TYPE-2 DIABETES MELLITUS (T2DM)

OBJECTIVES: To examine the impact of antidiabetic-induced hypoglycemia on clinical outcomes and resource utilization among T2DM patients in the Veterans Affairs. METHODS: This retrospective cohort study used electronic medical records between 01/01/2004 and 09/01/2010 from the Veterans Integrated Service Network (VISN) 16 data warehouse. Patients were required to have at least 2 records of T2DM diabetes, at least 6 months of continuous care with a diagnosis of T2DM and data on all medications in the year before the diagnosis. Patients were included if they had a diagnosis of T2DM (ICD-9-CM diagnosis (250.xx except for 250.x1 and 250.x3)). The first dispense date of a new antidiabetic agent (index drug) were defined as the index date. No hypoglycemia diagnosis was allowed during the one-year pre-index period. The hypoglycemia cohort and control cohort were defined by ICD-9-CM diagnosis of hypoglycemia (250.8, 251.0, 251.1, 251.2) within the index-treatment period and no hypoglycemia diagnosis during the one-year post-index period, respectively. Clinical outcomes included hospitalization and emergency room (ER) visits. Clinical outcomes were compared, by Cox regression models, controlling for age, race, gender, smoking status, baseline CCI and resource utilization. The hypoglycemia cohort was more likely to receive insulin/sulfonylurea as index drug. The post-index A1c was numerically higher in the hypoglycemia cohort than control cohort (10.12 vs 9.87, p = 0.0062). The hypoglycemia cohort was more likely to develop CVD (HR = 1.32, 95%CI: 1.13-1.54) and 40% more likely to develop micro-vascular complications, compared with the control cohort. Risks were higher for the hypoglycemia cohort than control cohort (18.2% vs. 9.2%, 32.3% vs. 20.7%, both p-values < .0001, respectively). CONCLUSIONS: Patients with hypoglycemia may lead to worse clinical outcomes and higher risks of hospitalization and ER visit than those without.

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