PREVALENCE OF RENAL INSUFFICIENCY IN A COMMERCIALLY-INSURED POPULATION WITH TYPE 2 DIABETES MELLITUS ENROLLED IN A LARGE, US NATIONAL HEALTH PLAN

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OBJECTIVES: The objective of this study was to estimate the prevalence of RI in a commercially-insured population with T2D and to evaluate differences in RI prevalence across prescriber and treatment trends.

METHODS: This study was conducted using claims data for commercially-insured patients aged ≥18 years with ≥12 months of continuous enrollment in a large, US national health plan. For the current analysis, all patients with a diagnosis of T2DM (ICD-9 codes 250.00-250.92) during the period of 1/1/05-12/31/07 were included. Patients were categorized by type 2 diabetes treatment status and RI was identified using eGFR calculation using serum creatinine (SCr) and age and gender. The prevalence of RI was calculated for both the entire population and for subgroups of patients with different treatment characteristics. Differences in RI prevalence were evaluated using a logistic regression model adjusted for age, sex, and race. RESULTS: The prevalence of RI in the commercially-insured population with T2D was 56.9%. Patient characteristics did not differ between human insulin and insulin analogues. CONCLUSIONS: The prevalence of RI in the commercially-insured population with T2D was significantly higher than previously reported. The results highlight the importance of monitoring RI in this population and the need for targeted interventions to improve glycemic control and prevent RI.

GLYCAEMIC CONTROL AND INSULIN UTILISATION IN UK PATIENTS WITH TYPE 2 DIABETES INITIATED ON EITHER BIPHASIC INSULIN ASPART 30 OR BIPHASIC HUMAN INSULIN 30

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OBJECTIVES: The objective of this study was to compare glycemic control and insulin utilization in insulin-naive patients with type 2 diabetes (T2D) initiated on biphasic insulin aspart 30 (BIAsp) or biphasic human insulin 30 (BHI). METHODS: A retrospective cohort study was conducted using the IMS Disease Analyzer, a primary care database. Study inclusion required subjects to be insulin-naive with at least one prescription for an oral anti-diabetic agent (OAD) within 30 days before index date and follow-up for at least 12 months. Average daily insulin dose (ADD) was compared at follow-up. Effect of age and sex as covariates on the difference in HbA1c and ADD between BIAsp and BHI was controlled for using ANOVA. RESULTS: Analyses were conducted on 630 BIAsp and 751 BHI patients on whom full data was available. The mean age for BIAsp patients was 61.6 years (59.7% men). For BHI, the mean age was 64.4 (51.9% men). From baseline to follow-up, the mean HbA1c for BIAsp dropped from 9.95% to 8.16% (change = 1.79%) and for BHI the HbA1c dropped from 10.34% to 8.62% (change = 1.72%). The HbA1c difference was borderline significant (p = 0.07). The ADD of BIAsp was 46.97 insulin units in insulin-naive patients and the BHI ADD was 63.28 IU (p = 0.01). CONCLUSIONS: In this real-world analysis in insulin-naive patients initiated on pre-bolus insulin analogues, there was a trend towards better glycemic control for users of BIAsp compared to BHI. Moreover, BIAsp was associated with a clinically relevant and statistically significantly lower ADD compared to BHI (p < 0.01). This has important implications for patient management and control of UK NHS costs.

GLYCAEMIC CONTROL AND INSULIN UTILISATION IN PATIENTS WITH TYPE 2 DIABETES INITIATED ON A LONG-ACTING INSULIN ANALOGUE IN A DUTCH REAL-LIFE SETTING

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OBJECTIVES: The objective of this study was to compare real-life glycaemic control, insulin utilisation and body weight changes in patients with type 2 diabetes (T2D) initiated on insulin detemir (IDet) or insulin glargine (IGlAR) and to discuss the results against treatment guidelines. METHODS: Patients with a history of oral anti-diabetic use starting treatment with IDet or IGlAR from 2004 through 2006 were included in a retrospective cohort study using the Dutch PHARMO data network. Glycaemic control (HbA1C < 7%) and daily insulin dose during unchanged insulin treatment up to 1 year of follow-up were compared between IDet and IGlAR users using multivariate regression analysis adjusted for age, gender, propensity scores, baseline HbA1C and basal-bolus therapy. The observed results are discussed in context of European diabetes guidelines. RESULTS: A similar pattern (p = 0.44) drop in HbA1C (from 8.6% to 7.5%) was observed for both IDet (n = 199) and IGlAR (n = 47). Few patients were at goal at baseline (15.6% with IDet and 12.1% with IGlAR). A similar proportion were at goal at follow-up (9.2% with IDet and 8% with IGlAR) adjusted for age and sex (0.2). The average daily dose was similar at 29 IU (adjusted mean difference 0.2; 95% CI 2.9-3.2). Median weight loss was 1 kg among IDet users and 0 kg among IGlAR users, but this was not statistically tested due to low patient numbers. CONCLUSIONS: There was no significant difference between users of IDet and IGlAR with respect to glycemic control and insulin dose in a real-life setting in the Netherlands. However, compared with treatment guidelines, the results showed few patients treated to target, which may indicate that basal insulin analogues are not titrated intensive enough or that rapid-acting insulin should be added to improve glycemic control.