Association between Sitagliptin Adherence and Self-Monitoring of Blood Glucose

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Abstract

Background:

We evaluated the association between self-monitoring of blood glucose (SMBG) use and sitagliptin or sitagliptin/ metformin (SSMT) adherence. SSMT was chosen as these medications have little risk of hypoglycemia and are believed to not require SMBG data for titration.

Methods:

This was an observational study using data extracted from a large United States insurance claims database (i3 InVisionTM Data Mart, Ingenix, Inc.). Data were extracted on noninsulin-using patients initiating SSMT for each 12-month period pre- and post-SSMT initiation. Logistic regression was used to assess the relationship between SMBG use and the likelihood of being medication adherent (defined as a medication possession ratio of \geq 75%) while controlling for covariates.

Results:

This analysis included 7,306 patients (57.6% male; mean age 54.2 years). Mean pre-SSMT hemoglobin A1c (HbA1c) was 8.0%. In the post-SSMT initiation period, 58% of patients were adherent with SSMT. Older age, male gender, prior use of oral diabetes medication, and lower HbA1c were associated with improved SSMT adherence. SMBG use was associated with improved adherence [odds ratio (OR) ranged from 1.198 to 1.338; p < .05] compared with patients with no SMBG use pre- or post-SSMT initiation. For patients who began SMBG after starting SSMT, greater SMBG use was associated with better adherence (OR 1.449 for higher vs 1.246 for lower strip use; p < .05).

Conclusions:

This study demonstrated that SMBG is associated with improved SSMT adherence. This relationship is strengthened with greater SMBG use.

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Abbreviations: (CI) confidence interval, (HbA1c) hemoglobin A1c, (HCP) health care provider, (MPR) medication possession ratio, (OR) odds ratio, (SE) standard error, (SMBG) self-monitoring of blood glucose, (SD) standard deviation, (SSMT) sitagliptin or sitagliptin/metformin, (T2DM) type 2 diabetes mellitus

Keywords: diabetes mellitus, medication adherence, self-monitoring of blood glucose, sitagliptin, type 2 diabetes mellitus

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