

Different Injection Frequencies of Basal Insulins in Type 2 Diabetes Patients under Real-Life Conditions: A Retrospective Database Analysis

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Abstract

Aims:

Little is known about routine use of basal insulins [glargine, detemir, neutral protamine Hagedorn (NPH)] in primary care patients with type 2 diabetes. The aim was to compare injection frequencies of basal insulins in type 2 diabetes in primary care practices, both for basal-supported oral therapy (BOT) and basal-bolus treatment [intensified conventional therapy (ICT)] regimens.

Methods:

Primary care data from 4211 glargine (BOT/ICT, 2247/1964), 1290 detemir (490/800), and 3876 NPH (1331/2425) insulin users were retrospectively analyzed (Disease Analyzer database, May 2009–April 2012). Logistic regression (>1 daily injection) and propensity scores were used to adjust for various confounders (age, sex, type of physician, dosage, body mass index, glycosylated hemoglobin).

Results:

Overall, >1 daily injections were observed in 7.5% of glargine users (BOT, 6.2%; ICT, 9.0%), which was lower than for detemir (overall, 25.4%; BOT, 22.0%; ICT, 27.4%) and NPH (25.4%; BOT, 23.9%; ICT, 27.2%) insulin (all $p < .001$). The adjusted odds of having >1 injection was lower for glargine compared with detemir (odds ratio, 0.26; 95% CI 0.22–0.32) and NPH-insulin (0.20; 0.17–0.23). Similar results were found for BOT or ICT and after propensity score matching.

Conclusions:

Glargine is associated with significantly lower injection frequencies than other basal insulins. These findings might impact patient-reported outcomes, quality of life, treatment satisfaction, and economic aspects of diabetes treatment.

J Diabetes Sci Technol 2013;7(5):1354–1358

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Abbreviations: (BMI) body mass index, (BOT) basal-supported oral therapy, (HbA1c) glycosylated hemoglobin, (ICT) intensified conventional therapy, (NPH) neutral protamine Hagedorn, (T2DM) type 2 diabetes mellitus

Keywords: injection frequency, insulin therapy, pharmacoepidemiology, primary care

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