

An Investigation into the Effect of Statins on HBA1C Levels in Pre-diabetic and Diabetic Patients

*Karar Ali, Chloe Argent
University of Warwick*

Background

Growing concern about statin use and risk of developing diabetes mellitus. Some literature suggests diabetogenic effects with long term statin use (Casula et al., 2017; Kim et al., 2018; Navarese et al., 2013), especially for prediabetic patients (Kostapanos et al., 2009). Majority of prediabetics/diabetics are on statins due to age-related comorbidities or diabetic complications, with a greater than 50-fold increase in prescription prevalence between 1995 and 2013. We sought to analyse HbA1c levels over time for this patient group.

Method

Filtered EMIS search, inclusion criteria: 1. Diabetic/prediabetic; 2. Continuous statin use for a full year; 3. HbA1c measures before, up to a month after and 9 months after statin commencement. Relevant data securely collected and analysed on Minitab 17 through paired t tests.

Results

247 patients identified. 62 patients randomly selected for analysis. For prediabetics, mean HbA1c significantly increased ($p=0.05$) before statin use (41.1mmol/mol [40.2-43.9]) to after short-term statin usage (42.7mmol/mol [40.8-45.0]). There was a similar insignificant increase in diabetics.

Key Messages

Currently, no specific recommendations for statin use in prediabetics. Patients on long-term statins, at risk of developing diabetes, need regular HbA1c monitoring. Statins should be continued if diabetes develops, in accordance with NICE guidelines, as CVD complications pose a greater health risk and there is no evidence that statins affects glycaemic control. However, healthcare professionals should be aware of the diagnostic limitations of HbA1c, and should use it in conjunction with other tests for diagnosis.

