The DiaMonD Study

The Dexcom CGM System Demonstrates Improvement of Several Measures of Glycemic Control in MDI Patients

Multiple Daily Injections (MDI) and Continuous Glucose Monitoring (CGM) in Diabetes

In this first-of-its-kind clinical trial, the benefit of CGM use by patients on MDI insulin therapy was investigated. The evidence was resounding — patients on MDI demonstrated significant improvements across several measures of glycemic control and variability, including:

- A1C Reduction
- Increase of Time Spent in Target Range
- Reduction of Time in Hypo- and Hyperglycemia

Study Objective & Methods

Objective:

Compare efficacy of MDI regimen augmented by CGM vs. self-monitoring of blood glucose (SMBG). Primary endpoint was A1C reduction in each group.

Research Design/Methods:

A 24-week, randomized controlled trial of 158 adult patients with Type 1 diabetes (≥25 years), split into 2 groups. Patient touchpoints reflective of common clinical practice (only one additional scheduled follow-up visit for CGM group, one week after CGM was initiated.)

Group 1: MDI+CGM (n=105)
Group 2: MDI+SMBG (n=53)

Results

A1C Reduction Primary Outcome:

Dexcom CGM users on an MDI regimen showed an average A1C reduction of 1% after 24 weeks of regular use, compared to baseline (difference of 0.6% compared to SMBG group [p-value <.001]).

>1% A1C reduction for 52% of patients

Secondary A1C Outcomes:

- Significant A1C reduction in Uncontrolled Patients
  Participants with a baseline A1C of ≥8.5% showed an average 1.3% reduction.

*Study conducted using the Dexcom G4® PLATINUM CGM System with updated algorithm, which uses the same algorithm as the Dexcom G5® Mobile CGM System.
The DiamonD Study\(^1\)
Impressions of Glycemic Outcomes (cont.)

**Increase of Time Spent in Range**
- Dexcom CGM System significantly increased time spent in range from baseline (70 - 180 mg/dL or 3.9 - 10.0 mmol/L):
  - CGM Group: Median 1.3 additional hours (+76 mins) in range
  - SMBG Group: No increase of time in range

**Reduction of Time in Hyperglycemia (>300 mg/dL or >16.7 mmol/L)**\(^1\)
- CGM Group: Median 40% reduction of time spent in severe hyperglycemia (51 minutes)
- SMBG Group: Median increase of 58 minutes spent in severe hyperglycemia

**Reduction of Time of Hypoglycemia, Particularly at Night (<60 mg/dL or <3.3 mmol/L):**
- CGM group
  - Nighttime: 79% reduction in the median time spent in hypoglycemia, from 2.9 - 0.6%

\(^1\) Investigators pooled data from weeks 12 and 24; \(\Delta\) time (median minutes/day): [pooled data - baseline data]

**CGM First\(^\text{TM}\)**
Recognized as the standard of care in diabetes management by ADA, AACE and the Endocrine Society\(^2\)-\(^4\), CGM use has been proven to both reduce A1C and decrease risk of hypoglycemia regardless of delivery method.\(^1\)\(^5\) When initiating or adjusting insulin regimens for your patients, CGM provides real-time insights for better glycemc outcomes. Optimize your patients’ treatment plans and recommend a Dexcom CGM System today.

For more information about adding CGM to your patients’ diabetes treatment plans, visit dexcom.com/global

References