#618 GLYCAEMIC OUTCOMES FOLLOWING USE OF THE MEDTRONIC 780G ADVANCED HYBRID CLOSED-LOOP SYSTEM. REAL WORLD EXPERIENCE FROM THE UNITED ARAB EMIRATES.

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Background and Aims

The Medtronic MiniMed 780G insulin pump (780G) is the first hybrid closed-loop system approved for use in the United Arab Emirates. A large proportion (>40%) of 780G users in the UAE attend our centre. This study aims to provide real world outcomes on the performance of 780G in people with type 1 diabetes (PwT1D) living in the UAE.

Methods

A retrospective observational study of electronic health records including PwT1D, age ≥16years commencing 780G between September 2021 and January 2024. To assess changes in HbA1c, weight and blood pressure at baseline and 1, 3 and 6 months following 780G initiation.

Results

372 PwT1D commenced 780G. 352 (94.6%) Emirati. Female 216 (58.1%). Mean (± SD) age 27.4±9.4years. At 6 months, HbA1c decreased 0.77% from 8.02±1.5% to 7.25±1.3% (p<0.0001) **Figure 1a**. In the group with initial HbA1c >9% there was a 2.43% reduction in HbA1c from 10.11±1% to 7.68±0.95% (p<0.0001) **Figure 1b**. No significant weight gain, 70.6±14.63Kg from 69.5±15Kg (p=0.44) **Figure 2a and 2b** and BMI 26.0±5.2Kg/m2 from 25.7±5.1Kg/m2 (p=0.50). No change in blood pressure (p=0.69) **Figure 3**.

Figure 1a – Change in HbA1c at 6 months

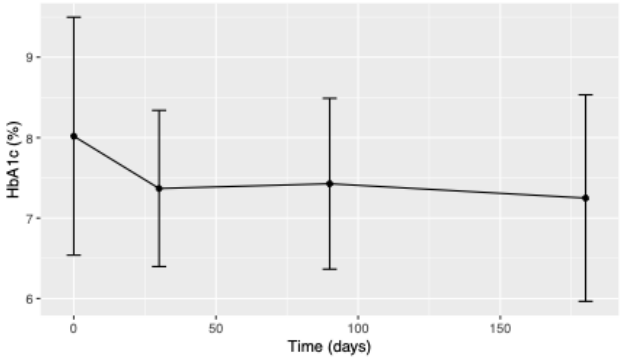


Figure 1b – Change in HbA1c by initial HbA1c

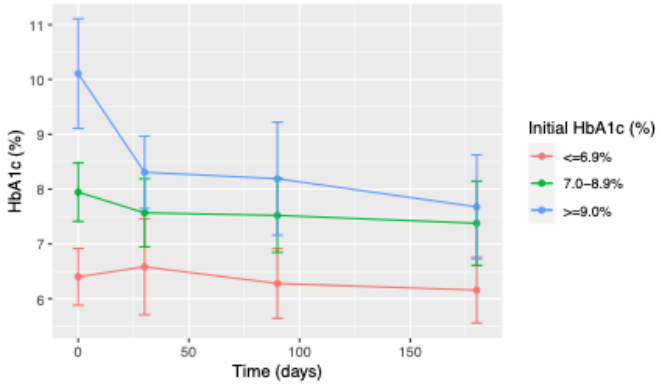


Figure 2a – Change in weight

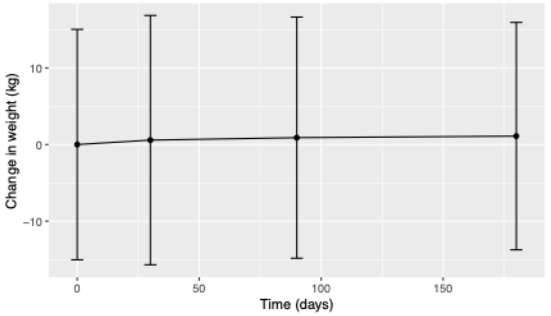


Figure 2b – Change in mean weight

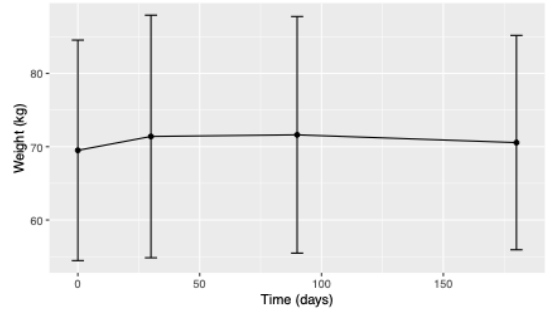
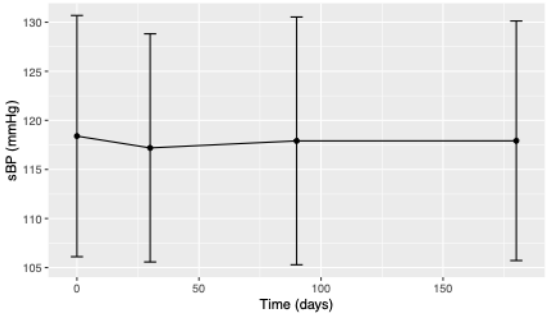


Figure 3 – Change in systolic BP



Conclusions

Real world use of the Medtronic 780G advanced hybrid closed-loop system in the UAE provides glycaemic outcomes comparable to those seen in clinical trials. Of significance for this region, the improvement in HbA1c was not associated with long term weight gain. Analysis of CGM metrics in this group is required.

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