**Abstract Title:**

Insulin pump with automated insulin delivery in recent heart transplant recipients: two cases.

**Background and Aim:**

Steroid-induced hyperglycaemia complicates heart transplantation. The use of multiple daily injection (MDI) insulin regimens are challenged by frequent and rapid fluctuations in steroid doses post-transplant. We report two cases of initiation of automated insulin delivery (AID) systems in heart transplant recipients.

**Methods:**

Two individuals with type 1 diabetes (T1DM) were initiated on the Medtronic 780G® SmartGuard system post-transplant. Routine immunosuppression included prednisolone. Outcomes included percentage time in range (TIR: 3.9–10 mmol/L) and hypoglycaemia (time below range, TBR <3.9 mmol/L), glucose management indicator (GMI) and total daily dose (TDD) of insulin pre- and post-pump commencement, and adverse events over 30 days.

**Results:**

Case 1: 46-year-old male with a >10-year history of T1DM who was managed with AID pre-transplant but changed to MDI perioperatively. AID was re-commenced 6 weeks post-transplant; prednisolone dose was 25 mg bd. Pre-AID TDD insulin was 116 units. After 30 days of AID, TIR was 74%, TBR 1% and GMI 7%; and prednisolone gradually reduced to 15 mg mane and TDD insulin 75.7 units. Case 2: 69-year-old male with a 43-year history of T1DM who was managed with MDI pre-transplant. AID was initiated 13 weeks post-transplant; prednisolone dose was 20 mg mane. Pre-AID TIR was 48%, TBR 1% and GMI 7.8%; TDD insulin was 45 units. After 30 days of AID, TIR was 72%, TBR 0% and GMI 7.2%; prednisolone gradually reduced to 5 mg daily and TDD insulin 37.2 units. There were no adverse events.

**Conclusion:**

AID using the Medtronic 780G® SmartGuard system effectively managed glycaemic levels and mitigated hypoglycaemia risk in the post-transplant period, despite high doses of glucocorticoids and frequent dose changes. AID adoption post-transplant appears safe and practical as an option for glucose management in patients with T1DM after heart transplantation. Further research with larger cohorts is warranted.