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## Efficacy of insulin pump therapy on diabetic treatment satisfaction and glycemic control among Saudi patients with type 1 diabetes mellitus

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**Objectives:** To explore the impact of insulin pump therapy on treatment satisfaction and glycemic control among patients with type 1 diabetes mellitus (T1DM).

**Methods:** This was a 6 months, prospective study conducted among 47, T1DM patients (aged 17-24 years) who were attended the diabetes clinic during April 2014 to November 2014 at Insulin Pump Clinic, Diabetes Treatment Center, Prince Sultan Military Medical City (PSMMC), Riyadh, Saudi Arabia. The respondents were purposively and conveniently selected and educated about the correct use of the insulin pump device (Paradigm(\*) Veo(™) system (Medtronic Minimed, Northridge, CA) and they were interviewed using the Arabic version of the Diabetes Treatment Satisfaction Questionnaire (DTSQ) at baseline, 3 and 6 months. Demographics, duration of diabetes mellitus and HbA1c were also collected.

**Results:** The mean age of the study cohort was  $19.4 \pm 1.72$  (mean  $\pm$  SD) years. Seventeen were males (36.2%) and 30 were females (63.8%). Compared to baseline significant positive differences were found in treatment satisfaction in both gender and patients those who have higher duration of diabetes mellitus at 6 months. Frequency of hyperglycemia and hypoglycemia decreased in female at 6 months and patient those who have shorter duration of diabetes mellitus. Compared to baseline significant positive differences were found in HbA1c among female and those who have shorter duration of diabetes mellitus. Both gender showed significant decreased in insulin necessity at 6 months and those with shorter duration of diabetes mellitus at 6 months.

**Conclusion:** Although MDI is a feasible preference for insulin delivery, the use of insulin pumps also should be considered for patients with T1DM as it increased patients treatment satisfactions, decreased the frequency of hypoglycemia, hyperglycemia and dropped the HbA1c level.

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