

Monitoring HbA1C in patients on continuous subcutaneous insulin infusion for the treatment of Type 1 Diabetes

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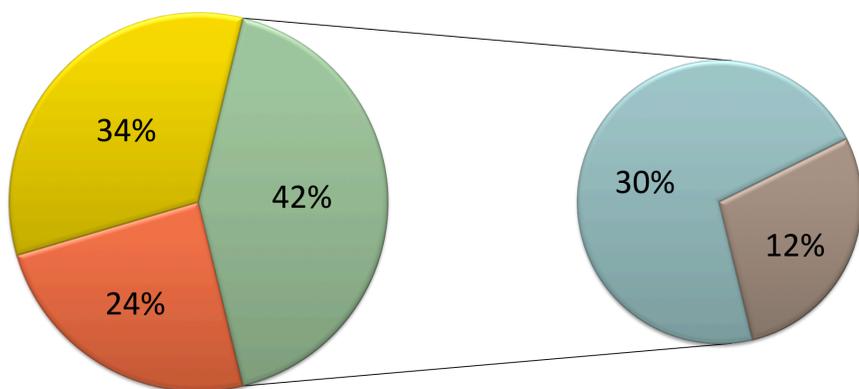
Introduction and Method

- A retrospective study of 33 paediatric patients with type 1 diabetes mellitus on insulin pump therapy
- Compared the HbA1C levels before and after starting insulin pump therapy
- Compared the change in HbA1C levels between males and females and in different age groups

Results

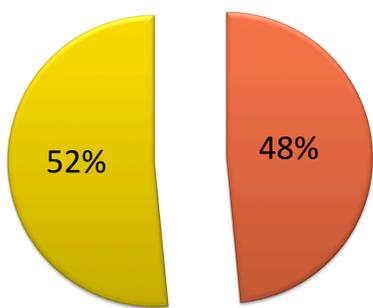
Age at diagnosis

■ >11 ■ 6 to 10 ■ <5 Males ■ <5 Females



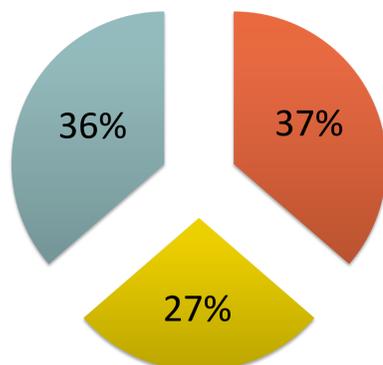
Gender distribution

■ Females ■ Males



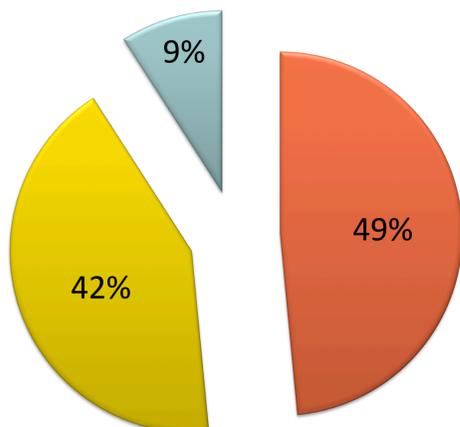
Age of starting the pump

■ <10 ■ 11 to 13 ■ >14



Mean HbA1c before and after starting insulin pump therapy

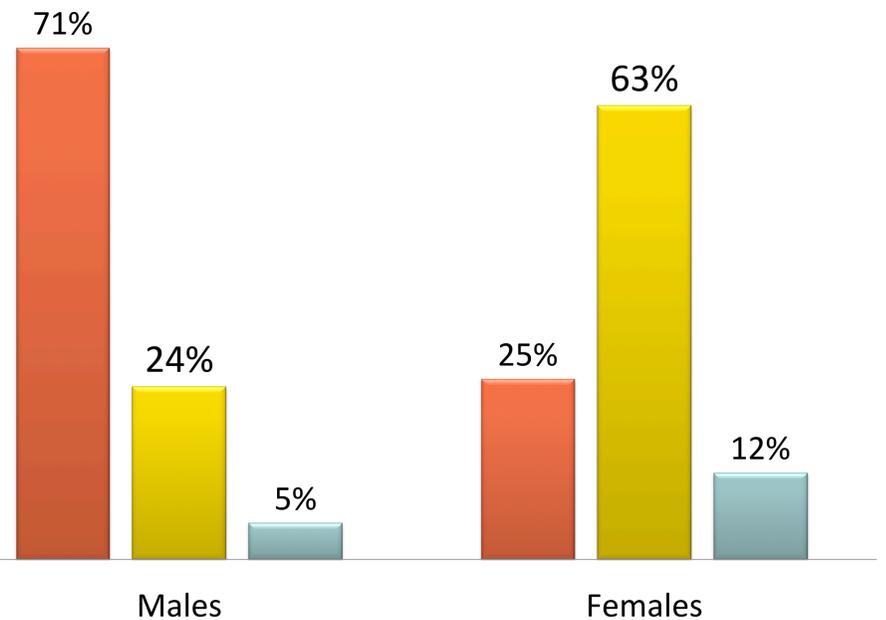
■ Improved by >0.5% ■ No improvement ■ Worsened by >0.5%



- The age of diagnosis was <5 years in the majority (42%)
- The gender distribution was almost equal
- The majority of patients were >11 years when insulin pump therapy was initiated (63%).
- There was an improvement of HbA1C of greater than 0.5% in 49% of our patient group
- 42% of patients did not improve their HbA1c levels

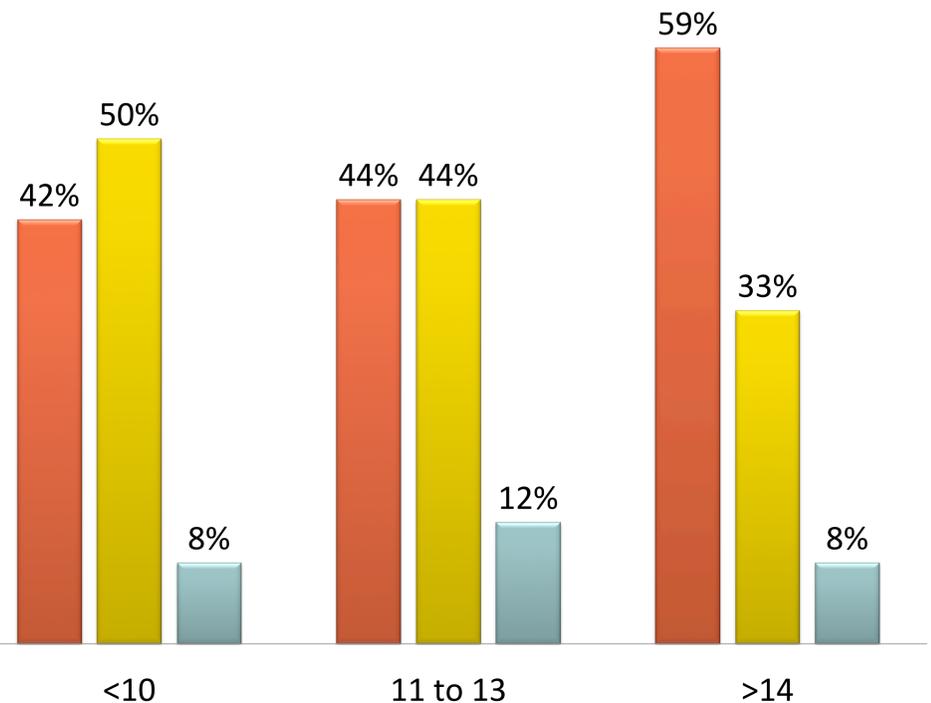
Change in HbA1c after starting insulin pump therapy by gender

■ Improved >0.5% ■ Stable ■ Worse >0.5%



Change in HbA1c after starting insulin pump therapy by age

■ Improved >0.5% ■ Stable ■ Worse >0.5%



- 71% of male patients showed an improvement of their HbA1c compared to 25% of female patients
- > 14 year olds improved their HbA1c results more compared to younger age groups

Conclusions

- The benefit of subcutaneous insulin pump therapy varied between male and female patients and among different age groups
- Several factors need to be addressed in the future to achieve an improvement in HbA1C e.g. compliance, dietary advice, training and education