

Impact of DAFNE and subsequent CSII therapy on Glycaemic Control in Type-1 Diabetes Mellitus

Yunus S, Forde H, Browne S, Twamley H, Fanning E, Smith D.

Department of Endocrinology and Diabetes Mellitus,
Beaumont Hospital, Dublin, Ireland.

Background

- Dose Adjustment for Normal Eating (DAFNE) structured education programme is an effective tool in improving glycaemic control in patients with Type-1 diabetes while reducing the frequency of hypoglycemic episodes.
- DAFNE however, does not solve all glucose related problems and patients often request or are recommended continuous subcutaneous insulin infusion (CSII) therapy post DAFNE.

Objective

- Out of our 370 DAFNE graduates, 46 have subsequently gone on to CSII therapy.
- The aim of our audit was to examine glycaemic control of the 46 DAFNE graduates before and after they completed DAFNE & then before and after starting CSII therapy and their reason for starting CSII therapy.

Methods

- The data was collected using the hospital's electronic database (CELLMA and PIPE) and by contacting the patients via phone for further details.

Results

- 56% patients were female.
- Mean Age was 40 ± 9.4 (mean \pm SD) years with a BMI of 26.6 ± 4.5 kg/m².
- Mean duration of Diabetes was 17.2 ± 8.5 years.
- Duration since completion of DAFNE at the time of study was 5.8 ± 2.2 years.
- Duration of CSII therapy was 4.0 ± 2.2 years.
- HbA1c before DAFNE was $8.3 \pm 1.2\%$ (67.2 ± 9.8 mmol/mol) compared to $8.05 \pm 1.0\%$ (64.5 ± 11 mmol/mol) 12 months post DAFNE - *p value*=0.31. (Chart-1)
- The indication for commencement of CSII therapy was to improve overall glycaemic control in 45% patients, impaired awareness of hypoglycaemia in 26% and patient preference, felt it would suit their lifestyle, in 23%.
- HbA1c before commencement of CSII was $8.3\% \pm 1.07$ (67.2 ± 11.7 mmol/mol) compared to $7.9\% \pm 0.9$ (62.8 ± 9.9 mmol/mol) after 12 months of CSII therapy - *p value*=0.04. (Chart-2).

Chart-1

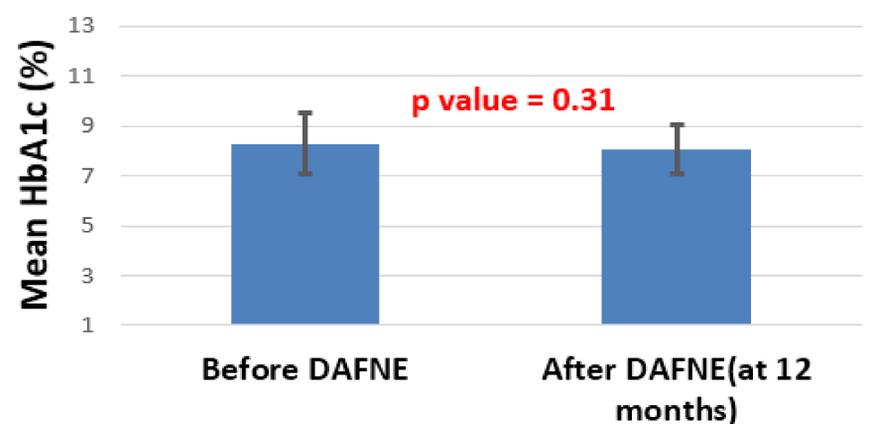
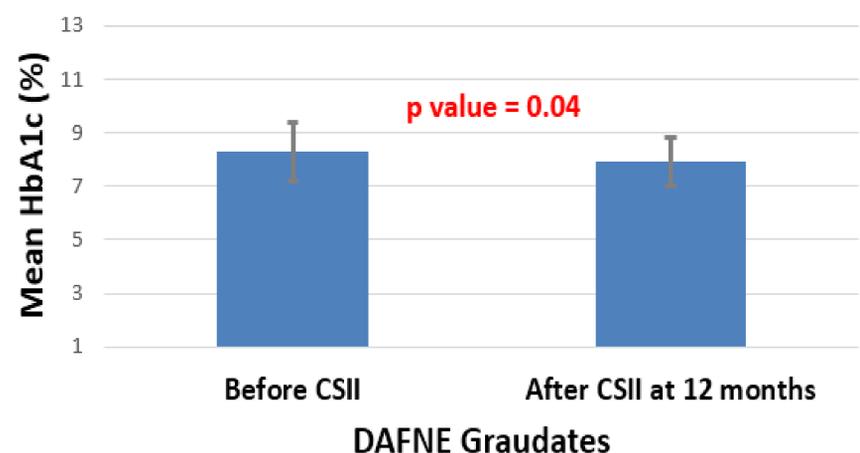


Chart-2



Conclusion

- DAFNE is an effective education programme for patients with Type-1 Diabetes but may not improve glycaemic control in all.
- Selected patients benefit from going on to CSII therapy post DAFNE and this can be associated with an improvement in their HbA1c.