

GLYCEMIC CONTROL AMONG CSII USERS AFTER 5 YEAR SUPERVISION IN ROUTINE CLINICAL PRACTICE: PILOT OBSERVATION STUDY



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Transparency - Competence - Result

Background and Aims

In most clinical studies continuous subcutaneous insulin infusion (CSII) lead diabetes mellitus (DM) patients to have better glycaemic control.
But in real-life routine clinical practice positive effects of CSII can be negate.

The aim of the study was to assess glycaemic control among CSII users in routine clinical practice.

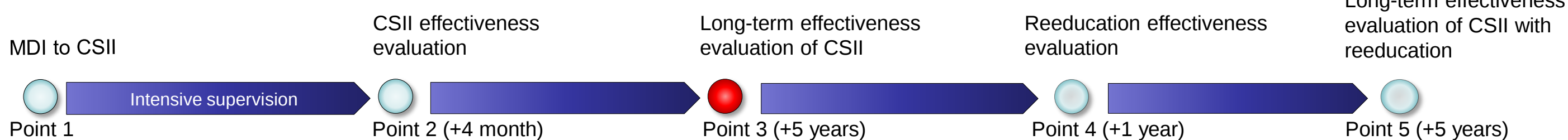
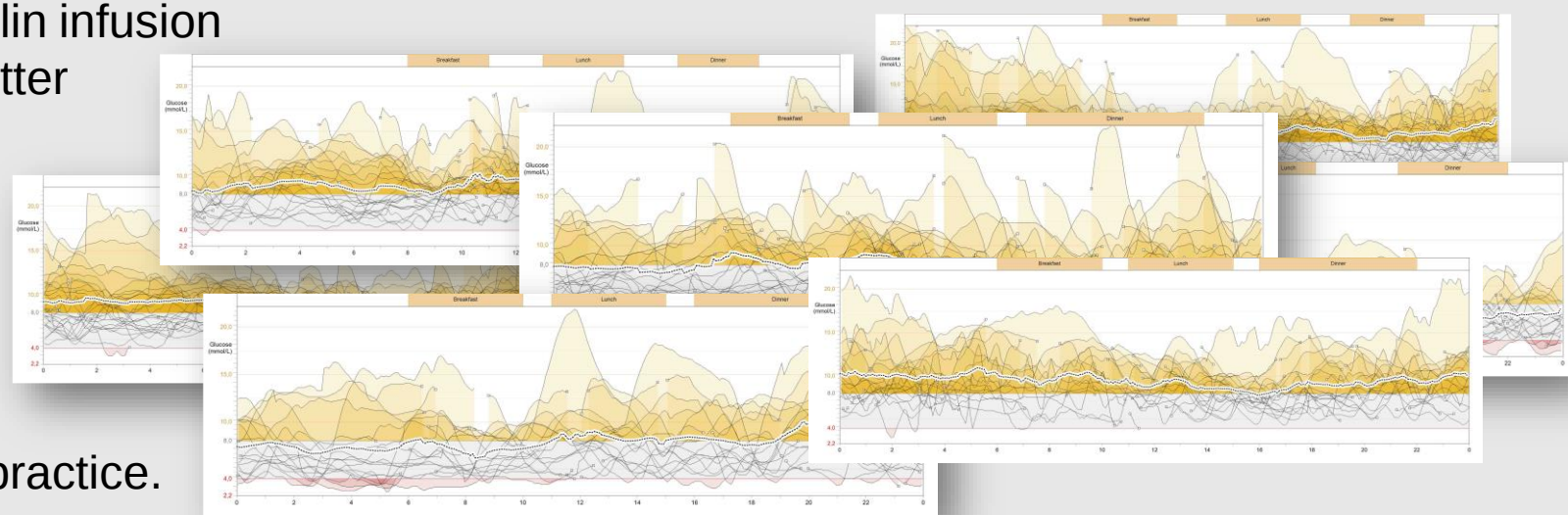


Fig. 1. Study protocol timeline.

Methods

This 5 years observational study included type 1 DM users of CSII. We selected patients who were transferred from multiple daily injections (MDI) to CSII in our research centre with special education and long-time supervision by endocrinologist (during 4 months after transferring to CSII). The next 5 years all patients were followed up by endocrinologists in routine clinical practice and didn't come to our research centre or insulin pump specialists. We have analyzed glycaemic control in 3 time points: before CSII initiation, after 4 month of supervision and after 5 years of routine real-life care.

Results

In preliminary part of our study we analyzed data from 17 patients. 4 months after transferring to CSII HbA_{1c} was significantly lower compared to a basic level (7,8% [7,0; 8,1] vs 8,5% [7,5; 9,5]) p<0,0001. 5 years later the HbA_{1c} was significantly higher (8,1% [7,7;9,1] vs 7,8% [7,0; 8,1], p<0,01), and found no significantly differences between basic HbA_{1c} and HbA_{1c} 5 years after transferring to CSII (p>0,05). In contrast, glucose variability (SD) didn't change significantly between 4 months and 5 years after transferring to CSII: 3,3 [2,8; 3,7] vs 3,3 [2,7;3,5], p>0,05.

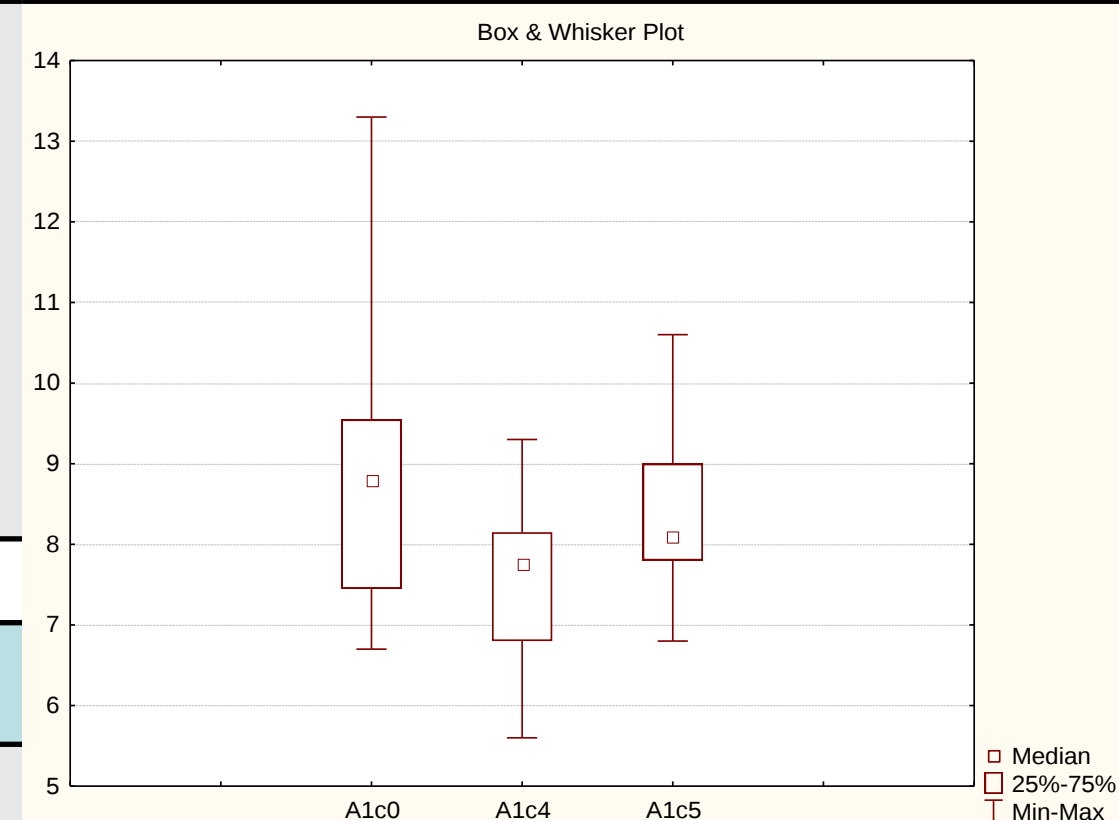
Conclusion

Using CSII without regular re-education and special supervision can damage positive effects of CSII.

Acknowledgements

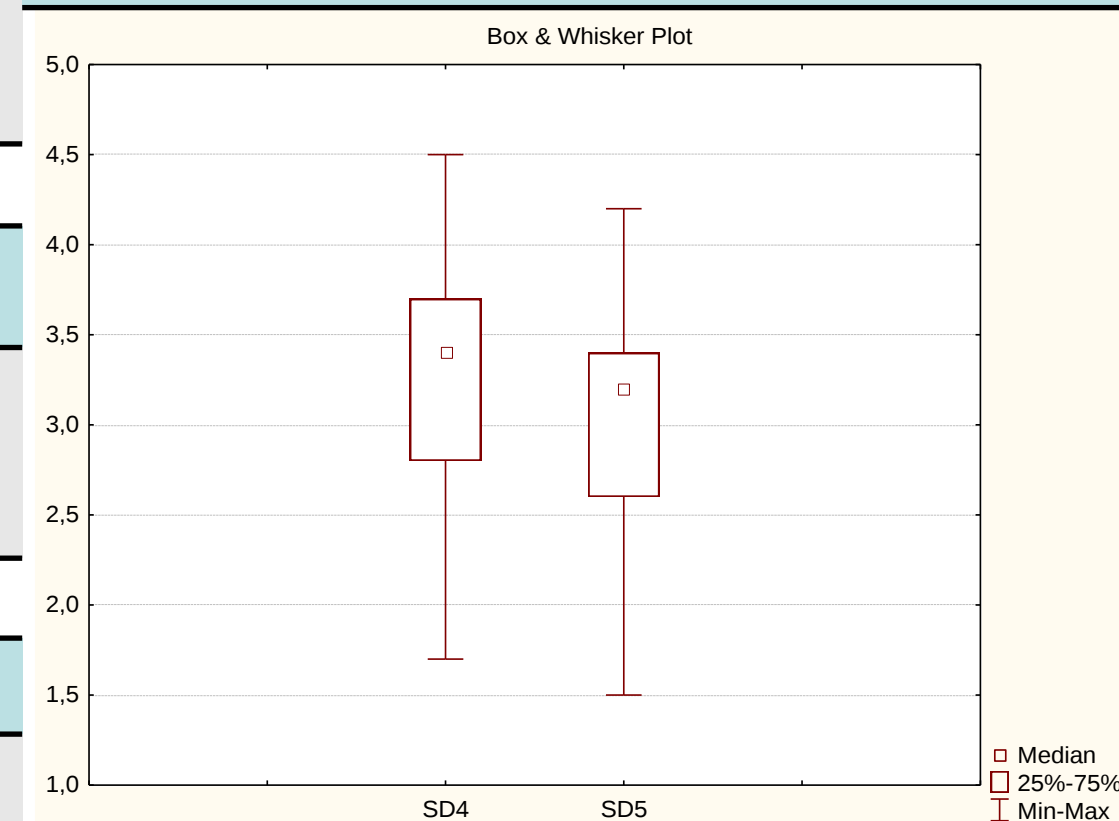
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Fig. 2. HbA_{1c} of CSII T1D users in 3 time points of the study.



Comments: A1c0 – HbA_{1c} before CSII initiation; A1c4 – HbA_{1c} 4 month after CSII initiation and intensify supervision; A1c5 – HbA_{1c} 5 years after CSII initiation and routine clinical practice supervision.

Fig. 3. Glucose variability (SD) 4 month and 5 years after CSII initiation.



Comments: SD4 – SD 4 month after CSII initiation and intensify supervision; SD5 – SD 5 years after CSII initiation and routine clinical practice supervision.