IMPROVING GLYCEMIC CONTROL WITH INSULIN PUMP THERAPY –THE IMPACT OF DIABETES DURATION

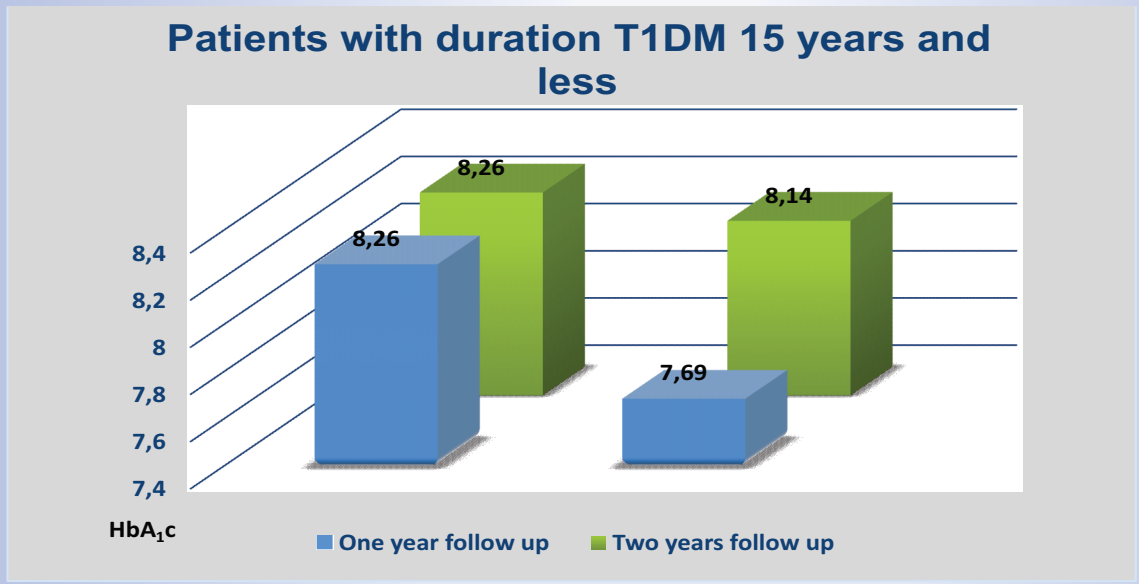
Sladjana Pejakovic[1], Djordje S. Popovic[1], Milena Mitrovic[1], Edita Stokic[1], Dragana Tomic-Naglic[1], Jovana Prodanovic[1], Branka Kovacev-Zavisic[1]

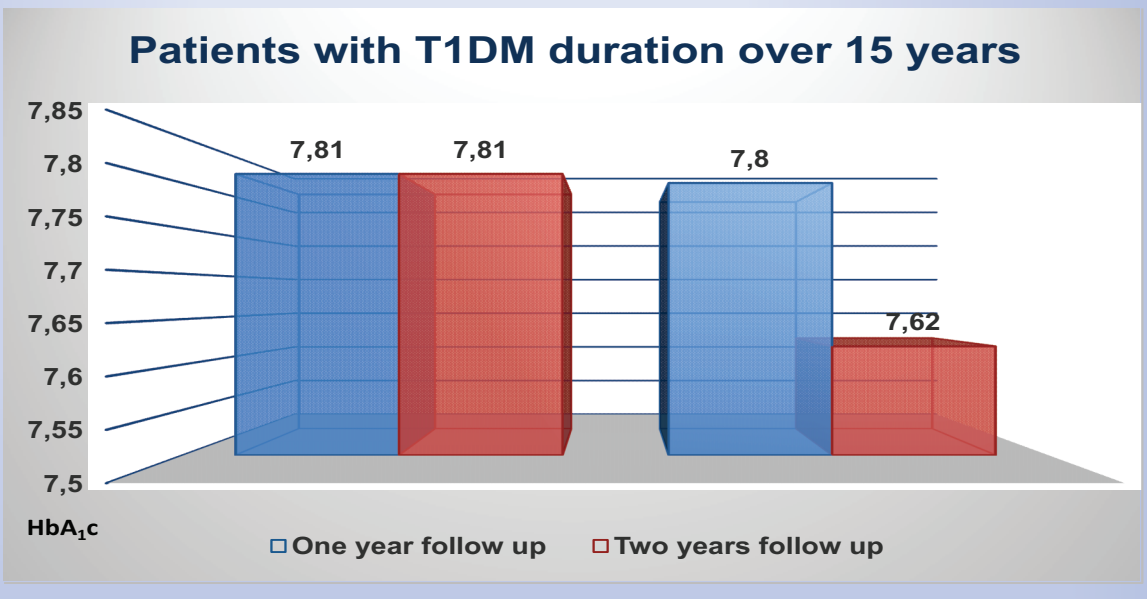
[1]Clinic for Endocrinology, Diabetes and Metabolic Disorders, Clinical Center of Vojvodina, Medical Faculty, University of Novi Sad, Serbia

BACKGROUND AND AIMS: Insulin pump therapy (IPT) represents the most physiological pattern of exogenous insulin administration. It provides better glycemic control with less hypoglycemic episodes, and improves quality of life. Data suggests that the most profound beneficial effect of IPT can be expected among patients with shorter duration of disease. The study is analyzing changes in HbA_1c after the start of IPT in patients with duration of type 1 diabetes less and greater than fifteen years at the moment of IPT initiation.

MATERIALS AND METHODS: The study has enrolled 35 patients starting IPT in a period between 2007 and 2013. Levels of HbA_1c at IPT initiation, after one and two years of follow-up were analyzed.

RESULTS: Less than one third (31.42%) of patients were men, and median age at the IPT initiation was 28 years. Comparing to the baseline, patients with duration of disease less than fifteen years (n=15) had a significant decrease in HbA_1c levels at one year follow-up (8.26 (7.68-8.89) *vs.* 7.69 (7.01-8.44); p=0.03), while decrease was not significant after two years of treatment (8.26 (7.68-8.89) *vs.* 8.14 (7.45-8.90); p=0.52). In group with duration of disease greater than fifteen years (n=20), changes in HbA_1c level were not significant at one (7.81 (7.33-8.32) *vs.* 7.80 (7.22-8.43); p=0.97), and two (7.81 (7.33-8.32) *vs.* 7.62 (7.16-8.11); p=0.39) year follow-up comparing to the baseline.





CONCLUSION: IPT results in a greater reduction in HbA_1c levels among patients with shorter duration of disease after one year treatment, but not after two years of IPT.