

COMPARISON OF MULTIPLE DAILY INSULIN INJECTIONS AND CONTINUOUS SUBCUTANEOUS INSULIN INFUSION IN TREATMENT OF PREGNANT WOMEN WITH TYPE 1 DIABETES

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Good glucose control is of great importance for normal pregnancy, fetal growth and delivery in women with type 1 diabetes. The aim of our study is to compare different insulin regimens - multiple daily insulin injections (MDII) and continuous subcutaneous insulin infusion (CSII, insulin pump) in treatment of pregnant women with type 1 diabetes. Our study include patients with type 1 diabetes - 10 women receiving MDII and 10 women on CSII, with no difference in mean age and disease duration. We compared diabetes control parameters of two groups, weight gain and rate of hypoglycemic episodes during pregnancy, birth weight of infants and their glucose level in first 48 hours after delivery. Patients continued the same treatment during delivery. Results show better control in group on CSII compared to MDII – HbA1c ($6.4\pm 0.3\%$ vs. $7.8\pm 0.6\%$, $p=0.05$), mean fasting glucose ($5.7\pm 0.4\text{mmol/l}$ vs. $6.9\pm 0.6\text{mmol}$) and mean prandial glucose ($7.1\pm 0.5\text{mmol/l}$ vs. $10.1\pm 0.5\text{mmol}$). Hypoglycemic episodes in CSII group were rare and not severe in contrast with MDII group. No significant difference was evident in weight gain. Infants of mothers on CSII have glucose level within normal range ($5.1\pm 0.2\text{mmol/l}$ vs $4.3\pm 0.4\text{mmol/l}$) while those of MDII mothers experienced hypoglycemic episodes in first hours after delivery. The birth weight was within 90th percentile in insulin pump treated mothers but not in MDII treated ($3.5\pm 0.5\text{kg}$ vs. $4.3\pm 0.6\text{kg}$) In conclusion CSII has more advantages in treatment of pregnant women with type 1 diabetes showing better control and safe infant delivery and normal metabolic changes in first days after birth.