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Insulin regimes for pregnant women with diabetes during religious fasting: Use of Glargine+Lispro versus Insulatard+Actrapid

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Introduction: Due to lack of studies on safety and absence established guidelines on management of diabetic pregnant women who wish to fast during Ramadan, women with pre-gestational or gestational diabetes are at very high risk and may be strongly advised not to fast. Many of them insist on carrying out this religious duty and some may not consult their physician at all.

Objective: To compare the glycemic control for pregnant women with diabetes among those using Glargine+Lispro with those using Insulatard+Actrapid during Ramadan fasting.

Methodology: A prospective randomized controlled open-labeled study conducted in Hospital USM during fasting month involving 16 pregnant women with diabetes using insulin who wished to fast during Ramadan. They were divided into two groups: Group-1 given Glargine+Lispro and group-2 given Insulatard+Actrapid. The participants were required to break their fast should they experience hypoglycemic symptoms. They were monitored weekly with blood sugar profile taken 4 times at 4 am, 8 pm, 5 pm and 10 pm. The glycemic control was measured by median of the glucose level per day and compared between the two groups. Statistical analysis was done using Statistical Package for Social Sciences (SPSS) version 22. The study had been approved by institutional ethical committee and informed consent obtained from all participants.

Result: All the participants were able to fast without major problems and no significant hypoglycemic event. The glucose level per day for whole Ramadan was lower in group-1 (6.39 mmol/l; IqR: 2.14) compared to group-2 (6.70 mmol/l; IqR: 1.13) with p-value of 0.749. For both groups, the glucose level during fasting was significantly higher compared to prior to Ramadan (6.58 mmol/l compared to 5.59 mmol/l with p-value 0.023).

Conclusion: This study suggests that pregnant women with diabetes requiring insulin can fast safely in Ramadan. Use of Glargine+Lispro lead to better glycemic control compared to Insulatard+Actrapid.

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