

Early insulin therapy in type 2 DM

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Epidemiological analysis showed an exponential relationship between the HbA1C and micro-vascular disease. Also, intensive glyceamic control demonstrated a significant risk reduction in micro-vascular complication independent of treatment modality and a borderline relative risk reduction in overall cardiovascular disease. These results emphasized the importance of reducing blood glucose early in the disease.

Although the benefit of intensive glyceamic control was obvious, the decline of beta cell function still remained. How to prevent diabetes progression became an important issue. Early subcutaneous insulin infusion (SCII) in newly diagnosed diabetic patients which showed early insulin infusion can effectively achieve goal of glyceamic control. Prolonged diabetic remission was also noted after 1 year follow up. The c-peptide and acute insulin response can be preserved after SCII. For pre-diabetes, early basal insulin intervention can effectively decrease the incidence of new diabetes.

Even though the beneficial effect of preserving β cell function, early insulin treatment may cause higher ratio of hypoglycemia. In addition, a long term observational epidemiological study demonstrated a conflict relationship between exogenous insulin therapy and worse outcomes of cardiovascular events. Therefore, the best regimen and length for insulin treatment should be further studied.