Insulin therapy in type 2 diabetes with oral anti-diabetic agents: basal insulin

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Abstract

Despite the well-established treatement goal for diabetes from diverse consensus and guidelines, inadequate metabolic control in pervasive. With respect to initiaing appropriate insulin therapy in patients with type 2 diabetes, cosiderable clinical inertia still exists. And this delay in initiating necessary insulin treatment often leads to prolonged hyperglycemia and increases the risk of diabetes complications. Many factors could lead to an undue delay in insulin therapy, both from physicians and patients themselves.

For most patients who no longer respond to combination oral antidiabetic therapy, the simplest first step is to start insulin therapy with a single injection of a long-acting basal insulin analog. The goal of basal insulin analog therapy is to improve fasting blood glucose levels. Typical starting doses are 10 to 20 Units of basal insulin given once daily (or 0.1-0.2 U/kg). Oral antidiabetic agents are usually continued when insulin is started, unless there are specific contraindications or substantial risks of hypoglycemia. The insulin dose should be titrated on the basis of a fasting blood glucose target. Numerous clinical trials have shown that basal insulin can be initiated successfully using basal insulin titration algorithms. The American Diabetes Association recommends a goal of less than 130 mg/ dL. Basal insulins can be self-titrated up to a target fasting blood glucose level without any hypoglyemic episode or a dose of more than 0.5 U/kg/day. If glycemic control is not achieved with appropriate once-daily dosing, intensification of the insulin regimen is considered without delay.