Module 1, Vignette 1, Tips for Initiating Mealtime Insulin

Juan Frias, MD

Here are a few tips with respect to initiating mealtime insulin. It's very important to select the right patient. All patients with Type 1 diabetes, given the natural history of this disease and the pathophysiology, need mealtime insulin. And in Type 2 diabetes, generally we initiate mealtime insulin after a patient is on oral agents, maybe a GLP-1 receptor agonist, and basal insulin.

So, if a patient is on basal insulin, has adequate fasting glycemic control, but is still not achieving an individualized A1C or time in range targets, frequently this is because of postprandial hyperglycemia. And these would be patients with Type 2 diabetes that we should consider initiating mealtime insulin in.

Education is critically important. We clearly need to educate the patient on the insulin delivery device, on when to administer the mealtime insulin, making sure they can differentiate the meal-time insulin from the basal insulin device so this is not confused; refreshers on glucose monitoring, whether it be self-monitoring or continuous glucose monitoring; and also signs and symptoms of hypoglycemia.

With respect to actual initiation, we need to decide on which insulin to use. State of the art would be a first- or second-generation rapid-acting insulin and then the dose. And generally, in patients with Type 2 diabetes, we will initiate mealtime insulin at one meal. This would be either the largest meal of the day or the meal that's having the biggest issue, if you will, with respect to postprandial hyperglycemia. And the initial dose would generally be 4 to 5 units prior to that meal or maybe you could use a calculation of 10% of the total basal insulin dose that the patient is using. And it's important to recognize and to let the patient know that this is just the initial dose and that this will need to be dose escalated or titrated over time to achieve the patient's individualized postprandial glucose target.

We should also consider, particularly in patients who are close to their individualized A1C target when they initiate mealtime insulin, reducing the basal insulin dose to help mitigate the risk of hypoglycemia maybe by 10% or so. And if a patient is on an insulin secretagogue, such as a sulfonylurea, I would definitely consider discontinuing the sulfonylurea. So, these are a few tips on patient selection, patient education, starting dose of the mealtime insulin, and what to do with the other antihyperglycemic agents in Type 2 diabetes patients in which we're starting meal-time insulin.