



Diagnosis Autoimmune Diabetes in Adults: Essential Vigilance for New-Onset Diabetes Resistant to Type 2 Treatments

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ABOUT THE STUDY

In the area of diabetes, the distinctions between Type 1 and Type 2 diabetes are well-known, each characterized by distinct pathophysiological mechanisms and typical patient demographics. However, an often-overlooked form of diabetes, Latent Autoimmune Diabetes in Adults (LADA), sits at the intersection of these two primary types and presents unique diagnostic and treatment challenges. Recognizing LADA is imperative, particularly for adults who exhibit atypical responses to conventional Type 2 diabetes treatments. Vigilance in diagnosis and management can significantly improve patient outcomes.

Understanding LADA

Latent autoimmune diabetes in adults is a form of autoimmune diabetes that manifests in adulthood, typically between the ages of 30 and 50. Unlike the rapid onset of Type 1 diabetes, which is usually diagnosed in childhood or adolescence, LADA has a slower, more insidious onset. Patients with LADA may initially be misdiagnosed with Type 2 diabetes due to the age of onset and the gradual development of symptoms. However, unlike Type 2 diabetes, which is primarily driven by insulin resistance, LADA involves autoimmune destruction of insulin-producing beta cells in the pancreas, akin to Type 1 diabetes.

Diagnostic challenges

The primary challenge in diagnosing LADA lies in its clinical presentation. Adults presenting with new-onset diabetes are often presumed to have Type 2 diabetes and are treated accordingly. Standard diagnostic criteria may include elevated blood glucose levels, HbA1c levels indicative of diabetes, and assessments of insulin resistance. However, these criteria do not distinguish between Type 2 diabetes and LADA.

A key indicator of LADA is the lack of response to oral hypoglycemic agents commonly used to manage Type 2 diabetes. Patients with LADA often show a progressive decline in beta-cell

function and may become insulin-dependent more rapidly than those with Type 2 diabetes. This deterioration is due to the autoimmune attack on the pancreas, which is not addressed by Type 2 diabetes treatments.

The role of autoantibodies

To accurately diagnose LADA, testing for specific autoantibodies is essential. The presence of Glutamic Acid Decarboxylase Antibodies (GADAs), Islet Cell Antibodies (ICAs), or Insulin Autoantibodies (IAAs) can confirm an autoimmune etiology. The presence of these autoantibodies distinguishes LADA from Type 2 diabetes and guides appropriate treatment strategies. However, such testing is not routinely performed in all cases of adult-onset diabetes, leading to potential misdiagnosis.

Treatment implications

The treatment of LADA differs significantly from that of Type 2 diabetes. While lifestyle modifications and oral hypoglycemic agents are the mainstays of Type 2 diabetes management, patients with LADA often require insulin therapy much earlier in the disease course. Early initiation of insulin can help preserve remaining beta-cell function and improve long-term glycemic control.

Moreover, the mismanagement of LADA with oral agents alone can lead to suboptimal glucose control and increased risk of diabetes-related complications. Recognizing the autoimmune nature of the disease allows for a more tailored approach, potentially incorporating immunomodulatory therapies aimed at preserving beta-cell function.

The need for vigilance

Healthcare providers must maintain a high index of suspicion for LADA in adults presenting with new-onset diabetes, particularly those who do not fit the typical profile of Type 2 diabetes patients or those who fail to respond to standard treatments. Key red flags include a lean body habitus, personal

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or family history of autoimmune disease, and rapid progression to insulin dependency.

Incorporating routine screening for diabetes-related autoantibodies in adults with new-onset diabetes could facilitate earlier and more accurate diagnosis of LADA. This proactive approach would enable timely initiation of appropriate therapies, potentially preserving beta-cell function and improving patient outcomes.

Latent autoimmune diabetes in adults represents a significant clinical challenge due to its overlapping features with both Type

1 and Type 2 diabetes. Misdiagnosis and inappropriate treatment can lead to poor glycemic control and increased complication rates. By encouraging awareness and implementing routine autoantibody screening, healthcare providers can better identify and manage LADA, ensuring that patients receive the most effective treatment for their condition. Vigilance and a detailed understanding of adult-onset autoimmune diabetes are needed for optimizing care and improving the quality of life for these patients.