

Case Study Responses

Expert Opinion provided by Derek LeRoith, MD, PhD

Chief of the Division of Endocrinology and Diabetes
Mount Sinai School of Medicine, New York, New York

Note: Readers are encouraged to visit www.InsulinJournal.com to review the details of a Case Study published in the July 2006 issue of *Insulin*.

This was the case of a 36-year-old white man with diabetes mellitus (DM) for 4 years who presented with persistent hyperglycemia while taking multiple oral agents.

Latent autoimmune diabetes of adults (LADA) is generally defined by the following features: adult age at the time of diagnosis made by detection of autoantibodies with a preceding history of DM not necessarily requiring insulin therapy. It may represent one end of the spectrum of type 1 DM or autoimmune DM, with metabolic features resembling type 2 DM (at least for the first few years of the disease). Thus, these patients generally present after the age of 30 years and demonstrate both impaired insulin secretion and insulin resistance; not surprisingly, they are diagnosed as having type 2 DM.

Question 1. Latent autoimmune diabetes of adults (LADA) is typically defined by all of the following except:

Answer: c. Need for insulin within 6 months of diagnosis.

Patients who are diagnosed with LADA do not require insulin within 6 months of their diagnosis. This is more typical of type 1 DM patients, who undergo a “honeymoon” phase where they are insulin independent for 6 to 12 months after diagnosis but then rapidly revert to needing insulin injections.

Question 2. Which autoantibodies are most likely to be elevated in a patient with LADA?

Answer: b. Anti-GAD antibodies.

The presence of autoantibodies makes LADA an autoimmune disease, and the presence of anti-glutamic acid decarboxylase (GAD) antibodies is the most consistent finding; the presence of anti-GAD and anti-islet cell antibodies make the diagnosis even stronger. As with type 1 DM, the presence of other autoimmune disorders (such as autoimmune thyroid and celiac diseases) is increased with LADA.

Question 3. If an adult patient with newly diagnosed DM is found to have circulating islet autoantibodies, what is the likelihood that the patient will eventually require insulin?

Answer: An answer to this question can be found in the results of the United Kingdom Prospective Diabetes Study. This study demonstrated that patients accepted into the trial with a diagnosis of type 2 DM who were found to actually have LADA eventually required insulin over the subsequent years.

Earlier introduction of insulin had no significant effect on outcome. A large study is under way, however, to investigate this aspect of treatment.

Question 4. If you suspect a patient has LADA at the time of his or her DM diagnosis, what is the best initial therapy?

Answer: The best initial therapy for a patient newly diagnosed with LADA should be based on achieving tight metabolic control. This is the same goal for all patients with DM.

Lifestyle interventions are important, and any of the currently available oral agents, either alone or in combination, are appropriate. There is no evidence, however, of β -cell preservation by any specific regimen. Within ~6 years of diagnosis, insulin will be required and should be used. The goal is to reduce complications of the disease by controlling the patient's blood glucose levels.

Suggested Readings

1. Furlanos S, Dotta F, Greenbaum CJ, et al. Latent autoimmune diabetes in adults (LADA) should be less latent. *Diabetologia*. 2005;48:2206–2212.
2. Gale EA. Latent autoimmune diabetes in adults: A guide for the perplexed. *Diabetologia*. 2005;48:2195–2199.
3. Leslie RD, Williams R, Pozzilli P. Clinical review: Type 1 diabetes and latent autoimmune diabetes in adults: One end of the rainbow. *J Clin Endocrinol Metab*. 2006;91:1654–1659.

Readers are invited to consider a new Case Study (see page 177) and submit responses to www.InsulinJournal.com before the deadline.