

### 33. LADA MISDIAGNOSED AS TYPE 2 DIABETES MELLITUS

**Author:** Agnė Baliūnaitė

**Co-author:** Gabrielė Žūkaitė

**Scientific adviser:** Džilda Veličkienė MD, PhD, MBA, Professor of Endocrinology

**Introduction.** Latent autoimmune diabetes in adults (LADA) is an autoimmune disease considered as biphasic type of diabetes because it has both type 1 diabetes mellitus (T1DM) and type 2 diabetes mellitus (T2DM) indications. LADA is genetically and immunologically related to T1DM because of its pathophysiology as progressive  $\beta$ -cell dysfunction occurs, while it is also similar to T2DM because of the age and in most cases alike phenotype. Some physicians may have a problem diagnosing LADA correctly as there are no clearly defined diagnostic criteria. This case is about a 51-year-old woman who was misdiagnosed with T2DM and was treated incorrectly in the beginning.

**Case presentation.** A 51-year-old woman was diagnosed with T2DM based on her high glycemia and was prescribed Metformin. However, she experienced side effects such as diarrhea and this kind of medication was cut off. Afterwards she was prescribed with Gliclazide 60 mg once a day but it did not help to correct her glycemia as well. Ineffectiveness of the drugs mentioned before led to the suspicion of immune dependent diabetes and prompt to test the antiGAD. The results were 1378,54 kU/l and HbA1c before therapy of insulin was 9,1%. These results confirmed earlier suspected diagnosis that diabetes was caused by the processes of the immune system. As a result, the therapy of insulin was started. The patient was prescribed insulin Toujeo 20 units per day in the evening and her glycemia after some time was in normal ranges. In order to diagnose LADA, there are no clear criteria, but there are several points which patients with LADA have to meet: the age of the patient should be > 35 years old, positive antiGAD test results and insulin therapy is not necessary in the first 6-12 months after the diagnosis. This woman met all the criteria mentioned before. It is necessary to mention that this patient also had nodular goiter (she experiences hyperthyroidism but after the usage of Metizol for one year it developed into euthyroidism) and was suspected with autoimmune thyroiditis as it is very common that people who have LADA experience problems with goiter. Other comorbidities apart from nodular goiter were arterial hypertension, obesity, dyslipidemia and diabetic nephropathy with normal renal function which misled T2DM with LADA at first.

**Discussion.** Even though the Immunology of Diabetes Society has established main criteria to diagnose LADA, the definition of it still remains controversial. There are some studies showing that about 10 % of the patients are misdiagnosed with T2DM while actually having LADA. Heterogeneity of this disease as it varies genetically, phenotypically and immunologically complicates the treatment and there is still no determined first-line treatment.

**Conclusion.** Diagnostic criteria of LADA are not very clear and this leads to acceptance of incorrect diagnosis and improper treatment is chosen. These factors can worsen the situation and trigger the disease even more.