Clinical charcteristics of 31 patients diagnosed with Latent Autoimmune Diabetes in Adult (LADA) in a multi-centric study in Mexico

Raquel N. Faradji, Carmen Castillo-Galindo, Natalia E. De La Garza-Hernandez, Sigfrido Miracle-López, Claudia Ramirez-Renteria, Alejandro Romero-Zazueta, Jose J. Ceballos-Macías, Ana C. Uribe-Wiechers, Maricela Vidrio-Velazquez, Divany Montes-Valdespino, Aurora Rebolledo-Ramirez, Paloma Almeda-Valdes, RENACED Diabetes Tipo 1 Research Group

CONTACT INFORMATION Raquel N. Faradji M.D., Clinica EnDi, rfaradji@gmail.com

INTRODUCTION AND AIM

Latent autoimmune diabetes in adults (LADA), is a heterogeneous disease characterized by insulin independence for >6 months after diagnosis and the presence of islet cell autoantibodies.

Information regarding LADA epidemiology, patient's diagnosis, clinical characteristics and follow-up in Mexico is lacking.

An online-system, RENACED Diabetes Tipo 1 (DT1), registers longitudinal information of Type 1 Diabetes (T1D) and LADA patients in Mexico.

METHODS

Descriptive analysis of 31 patients diagnosed with LADA (from 7 different Mexican States) registered in RENACED DT1 as of 10/23/2018.

RESULTS

64% of patients were diagnosed in the last 10 years, 51% women and 49% men.
Average age at diagnosis was 37 years old (yo).
Fig.1 shows the age distribution, in percentage, at diagnosis.
Mean HbA1c and BMI at diagnosis was 9.2% and 24 kg/m^2.
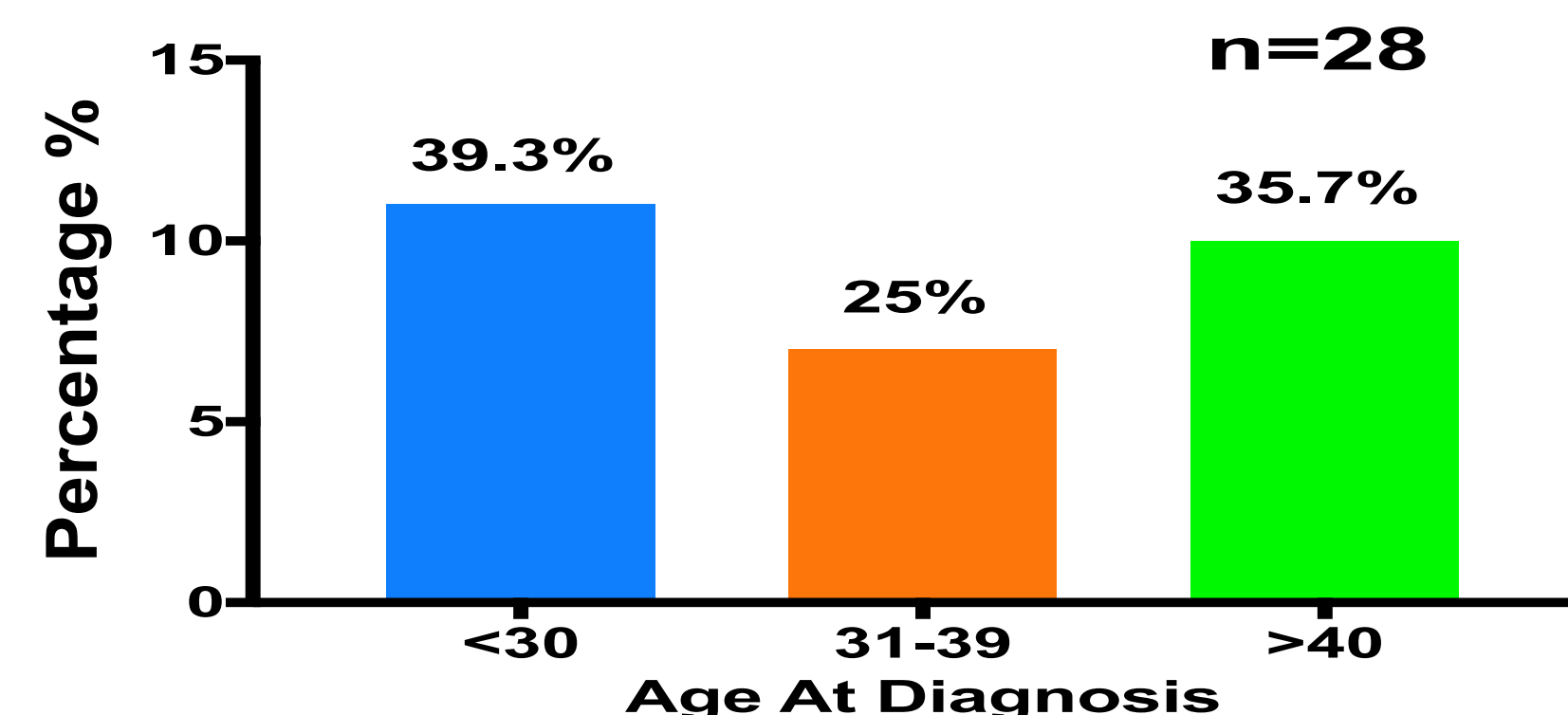

Fig. 1 Distribution of age in percentage at diagnosis

Regarding auto-antibody positivity, 61% were positive for GAD65, 9.7% insulin, 6.5% islet, 6.45% IA2, 13% ZnT8 and 19% for ≥2 auto-antibodies.**(Fig 2)**
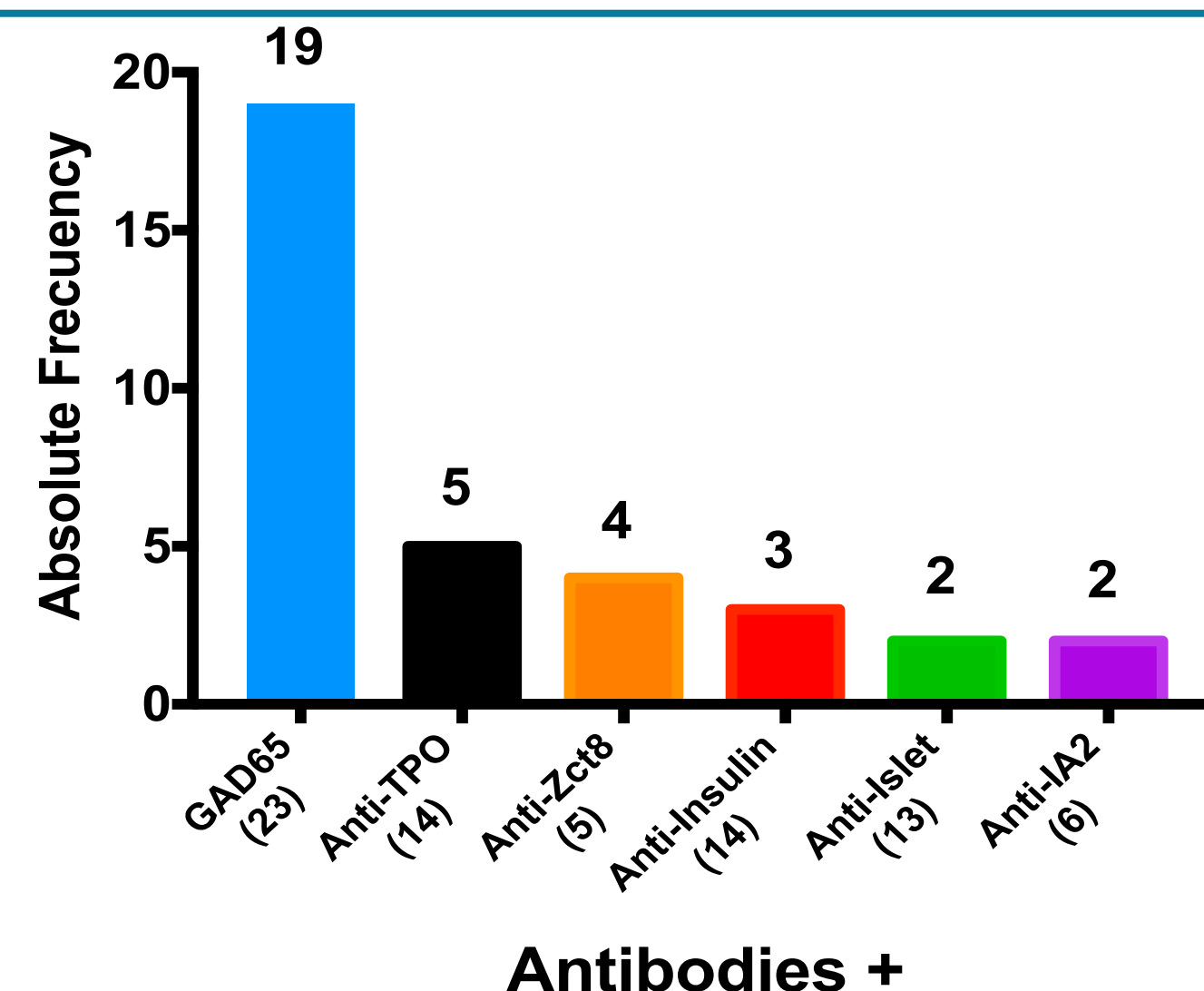

Fig. 2 Auto-antibody positivity

At diagnosis, 22.5% were hospitalized and 9.7% presented with diabetic ketoacidosis (DKA); 54% were treated with oral agents, 19% with insulin and 9.7% with both.

At the time of analysis, 30 patients remain active (a 61 yo patient died of hepatic carcinoma).
Mean age and diabetes duration are 46 yo, and 8 years, respectively.
Mean HbA1c and BMI are 8±2% and 24kg/m2, respectively. Initiation of insulin occurred at ≥1 year from diagnosis in 45% of patients. Mean time from diagnosis to insulin use was 687 days (0-2191). Three patients remain off insulin (for 314, 565 and 3144 days).
Of the 87% of patients who are on insulin, 12.9% are treated with an insulin pump, 61% are on MDI, 9.7% on basal insulin and 3.2% on a co-formulation; 58% have used metformin, 29% DPP4-inhibitors and 16% sulphonylureas. DPP4-inhibitor users, have a lower HbA1c **(Fig 3),** and a higher percentage reach an HbA1c of ≤7% (78% vs 9%) p<0.01.
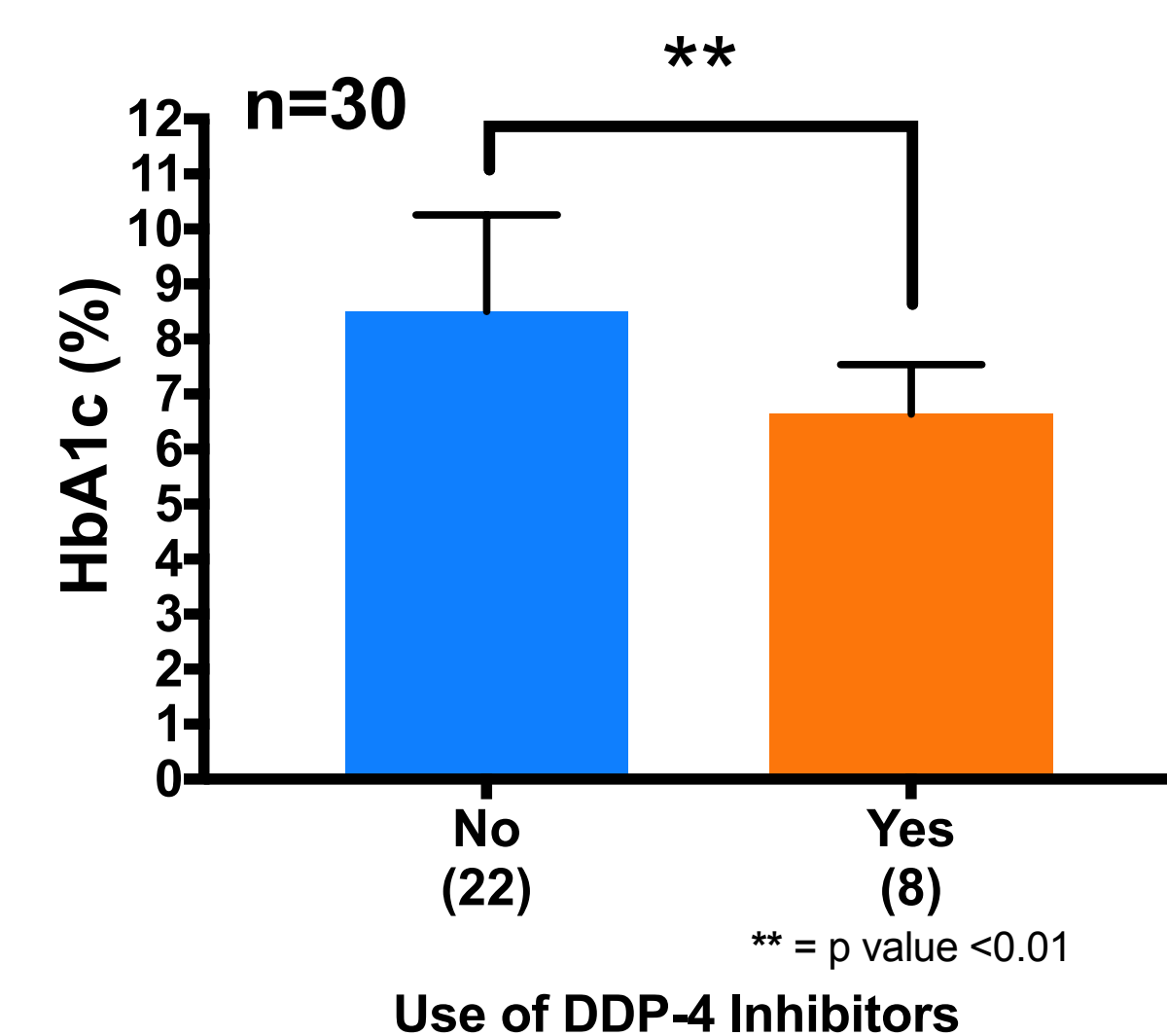
DKA post diagnosis has occurred in 3 patients, and severe hypoglycemia in 2. One patient has diabetic retinopathy and 3 patients have neuropathy. Hypothyroidism occurs in 22.5% of patients, and 16% are positive for anti-thyroperoxidase (TPO) antibodies. Dyslipidemia occurs in 22.5% and 2 patients have hypertension.

DISCUSSION

LADA shares clinical and metabolic characteristics with T1 and T2 diabetes and there is still a high prevalence of misdiagnosed cases. To help understand the presentation of this condition in Mexico, the registration and follow-up of more LADA cases is needed. Interestingly, in 45% of the patients insulin administration was started at ≥1 year of diagnosis.

CONCLUSIONS

This is the first report regarding LADA patients in Mexico. Recognizing this condition is important to avoid delay in optimal treatment. Further analysis should study those characteristics associated with delayed insulin use and optimal metabolic control.

Fig. 3 Difference in metabolic control among DPP4-inhibitor users vs non users.

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