Real –world clinical evolution of type 1 diabetes patients on twenty years.

García Cuartero B (1), González Vergaz A. (2), Sánchez Salado L. (2), Sanchez Escudero V. (2), García Lacalle C (3), Diaz Tardón S. (2); Fernández Rodriguez M. (2).

(1) Pediatric Endocrinology Unit, Pediatric Department, Ramon y Cajal University Hospital. (2) Pediatric Endocrinology Unit, Pediatric Department, Severo Ochoa University Hospital. (3) Biochemistry Department Severo Ochoa University Hospital.

Introduction

Type 1 diabetes mellitus (T1DM) is a chronic disease with important complications .

Objective

Describe clinical characteristics, metabolic control and comorbidities of our paediatric diabetes population .

Methods

T1DM patients diagnosed from 1996-2016 were included.
Celiac and thyroid disease screening were analyzed .Clinical and biochemical data were compared during evolution.
SPSS.21 for statistical study.

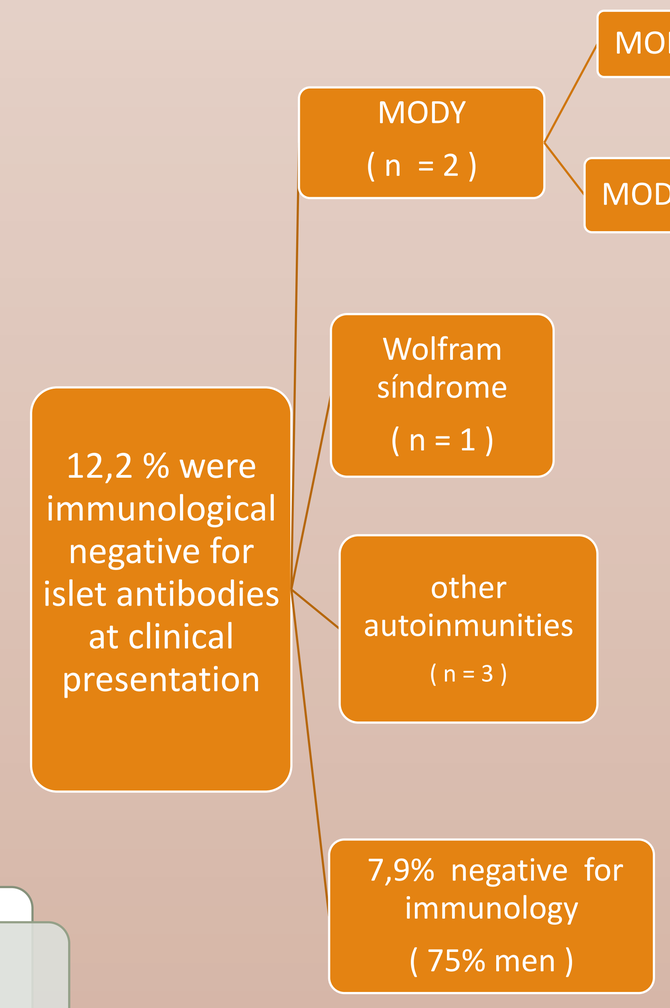
Results

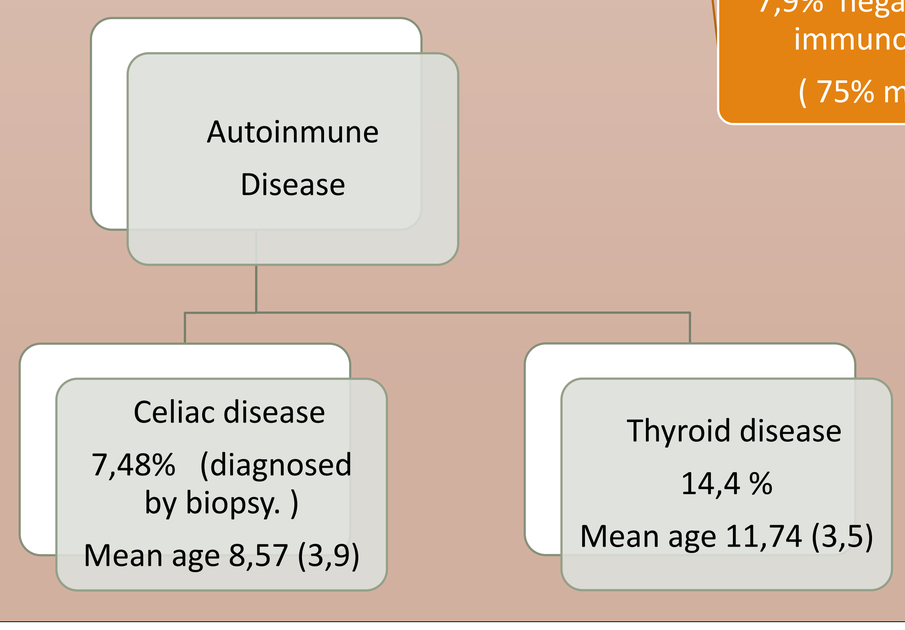
- 187 patients: 55,6 % males were follow at least one year and 40 (21,3%) during more than 10 years
- Mean age at onset 8,57 (0,5-15) years
- Table 1 contains clinical and biochemical date.

	Total	Onset 1996-2005	Onset 2006-2016	P value
Age onset (years (%))				
< 5	25,14	26,2	16,9	P 0,02
5,1- 9,9	32,62	30,4	55,41	P 0,001
10-15	39,32	43,4	27,69	P 0,001
Clinical presentation%				
✓Ketoacidosis	37,7	41,2	33,3	P 0,001
✓Hyperglicemia with ketosis	47,7	48,71	44,4	ns
✓Hyperglicemia	14,4	10,09	21,5	P 0,001
A1c Hb at onset	10,84 (2,48)	10,7 (2,53)	10,94 (2,56)	ns
Peptide C ng/ml (mean SD)				
✓Basal	0,70 (0,5)	0,75 (0,64)	0,61 (0,44)	ns
✓Post- glucagón	1,28 (0,08)	1,35 (1,28)	1,08(0,6)	0,04
Insulin treatment (%)				
✓Multiple injections	78,04	84,41	67,7	
✓ISCI	21,96	15,59	32,30	
Follow up (years)	6,86 (1-15,75)	8,5 (2-15,75)	5,83 (1-11,9)	P 0,001
A1c Hb (% median during evolution)				
✓NPH	7,50	7,5	7,5	ns
✓Long acting -insulin analog	7,65	7,8	7,65	ns
✓ISCI	7,32	7,3	7,30	ns

- There were no differences between age at onset and clinical presentation

- A1cHb is lower and residual function is significant higher in those diagnosed at onset on hyperglycemia (p<0,05).





- 6,4% develop intermittent microalbuminuria with no differences with A1C Hb but with duration of disease (Median 13 vs 6,5 years (p0,01))
- No arterial hypertension were detected.
- No retinopathy were detected.

- 68,5% of patients mean A1 cHb were < 7,5%.
- Severe hypoglycemia in 2,3% without differences between treatment.

Conclusions

- CAD presentation reduce with time
- High prevalence of associated diseases demostrate the need for screening.
- Low complications with good metabolic control in most of patients.
- It ´s necessary to re-evaluate negative immunological patients for an etiological diagnosis .