

INTRODUCTION

Currently, type 1 diabetes (T1DM) is defined by the autoimmune destruction of the pancreatic β cells that culminates in dependence on exogenous insulin, typically 1 to 3 years after diagnosis. This ability to maintain a residual function of pancreatic β cells is, however, heterogeneous, appearing to be worst if the disease is early diagnosed. Recently, it was demonstrated that many type 1 diabetic patients produce small amounts of insulin decades after diagnosis.

CLINICAL CASES

CASE 1

42 years-old man
T1DM (positive anti-GAD antibodies) diagnosed 18 years ago

- reasonable metabolic control
- no known complications
- insulin pump (0,6u/kg/day)

Hypertension and dyslipidemia (linisopril and rosuvastatin)
Family history of diabetes (parents and brother)

CASE 2

32 years-old female
Diagnosed with diabetes at age 19.

- chronic poor metabolic control
- irregular treatment with oral antidiabetic agents (metformin, sitagliptin and gliclazide)

Family history of diabetes (mother and uncles)

elective laparoscopic cholecystectomy

complicated with choleperitonitis (transferred to our hospital)

nil per os for 7 days during the postoperative period under glycosylated fluids (150gr/daily)

Glycemia	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
7h		218	225	178	180	186	210	152	134	125
12h		174	186	187	162	142	97	113		122
18h		226	100			156	133		150	159
23h	260	210	181	171	147			159	145	

without exogenous insulin administration for 7 days controlled blood glucose levels without acidemia and ketonemia

referred to Endocrinology department

- poor metabolic control (HbA1c 14,8%)
- lack of therapeutic adesion

positive anti-GAD antibodies (120,0 U/mL ; N:<10)

measurable C-peptide (0,39 ng/mL; N: 0,8 – 6,0)

T1DM

insulin therapy / lack of therapeutic adesion

recent admission for DKA (first known episode)

DISCUSSION

The residual insulin production, detectable by the assay of C-peptide and its functional and clinical significance have been recently discussed. According to recent evidence, these cases show us that insulin production in patients with T1DM can be kept for many years after diagnosis and that the end of the "honey-moon phase" does not necessarily lead to the absence of insulin production.

