

# Simultaneous changes in trends in Incidence of Children Diabetes Type 1 in distant geographic regions

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Non-disclosure statement

## Introduction

The epidemiology of childhood type 1 diabetes (DM1) allows us to understand the genetics and environmental factors involved in one of the most prevalent chronic diseases in children. The unification of methodological recommendations has allowed us to follow new research lines..

## Method

**Type of study:** observational  
**Population:** under 13 years old and DM1  
**Region:** Extremadura  
**Period:** 1996-2011

### Objective

To examine secular trends in the incidence of DM1 in children, by the annual percentage change (APC).

**Grade of ascertainment:**

98,9%

## Results

577 cases

Age-and sex-adjusted incidence: 22.7cases/100 000 inhabitants

The incidence over periods of four years was not significantly different.

### Analysis of the APC

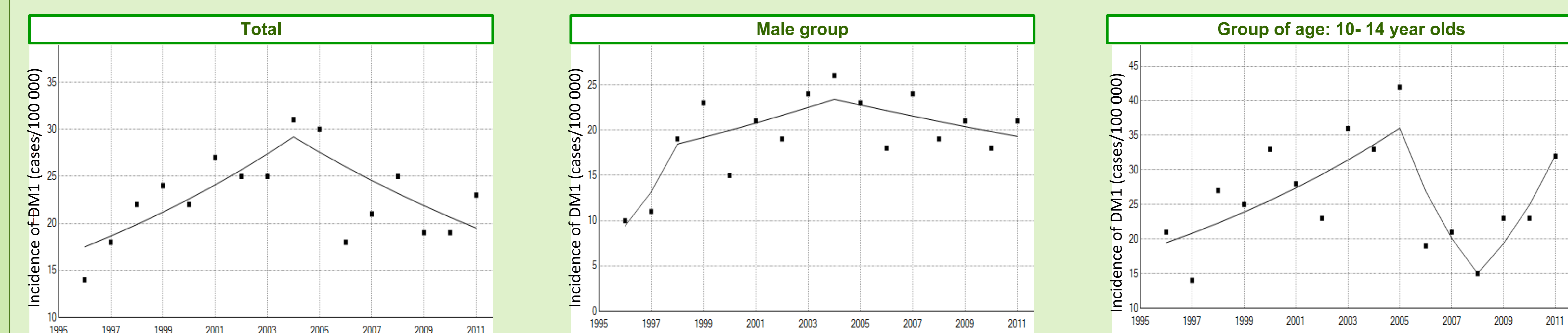
1° The incidence increased annually by 6,6% until 2005,

2° followed by a plateau until the end of 2011 ( $p < 0,01$ ).

Analysis by gender. The male group: the same pattern ( $p 0.012$ ) but no in the female group.

Analysis by age. The group of 10-14 year olds: the same pattern ( $p 0.025$ ). There were no changes in other age groups.

## Figures: Analysis of the incidence by APC



## Conclusions

1. The analysis of annual percentage change should be included in the recommendations of the international epidemiological DM1 studies in order to avoid mistakes in the interpretation of the results.
2. It has been detected a reversed trend in the incidence of DM1 in southern Europe.
3. In addition, according to these results, the related environmental factors could same year affect specifically the group of males aged from 10 to 14 years old.