Seasonal variation and epidemiological parameters in children from Western Greece with Type 1 Diabetes Mellitus (T1DM).

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INTRODUCTION/OBJECTIVE
A positive correlation between the onset of T1DM and winter has been suggested by studies conducted in different countries. We investigated the seasonal variation of T1DM diagnosis and additional epidemiological parameters in children from Western Greece diagnosed with T1DM.

METHODS
105 patients, 44 males and 61 females, aged 1 to 16 years (mean: 8.2±4 years) were studied. The date of the diagnosis, the order of birth, gestational age, birth weight, the mode of delivery, parental age and pubertal status were recorded from the patients’ files.

RESULTS
The mean age at diagnosis was 8.2 ± 4 years (min: 1, max: 16). The majority of the studied patients were diagnosed during the 6-month period of October to March (57 patients – 54%), as compared to the warmer months of April to September (48 patients – 46%). 51% of the children were first born and 87% were born at full term, whereas 11.5% were pre-term babies. 61% were born by vaginal delivery and 39% by caesarean section. The mean birth weight was 3261 ± 595 g (min: 1335g, max: 4550g).

CONCLUSIONS
Our results are in agreement with the reported seasonal variation of T1DM onset in other Greek, but also European, populations. The positive correlation between T1DM presentation and colder months may be explained by factors that are related to lower temperature, such as infections. The majority of the children were first-born, born at full term, with a normal birth weight and pre-pubertal at diagnosis. Although most children were born by vaginal delivery, a significant percentage was born by caesarean section, which is a possible risk factor for the development of T1DM in susceptible subjects.

REFERENCES