EP-939 Thyroid non-cancer: Seasonality in paediatric graves disease compared to the general population: Impact of month of birth - a national study

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Introduction
Paediatric Graves’ disease (PGD) is an uncommon autoimmune disorder with a multifactorial origin. In some autoimmune endocrinopathies the seasonality of month of birth (MOB) distribution differed from the general population. In thyroid autoimmune disease an association between increased incidence and seasonal pattern of MOB has only been published in adults. This is the first national study of seasonality of MOB in PGD.

Objectives
The aim of this work was to analyse the impact of seasonality of MOB on PGD incidence in Portugal.

Methods
In 2013, the Portuguese Paediatric Society of Diabetes and Endocrinology undertook a national multicentre study of the PGD (153 cases). We compared the distribution of MOB within this study with the Portuguese population (data from the National Institute of Statistics). Since the mean age at diagnosis was 11 years, we restricted the study period to 2001 to correct for that variation (125 cases). To evaluate whether the subgroup with higher autoimmune response had a stronger seasonal pattern we selected the cases with TRABS at diagnosis 10 times above the upper limit of normal (50 cases). The Walter and Elwood method was used because it takes into account the population at risk. The statistical analysis was performed with STATA software version 12.0.

Results

Whole cohort
A total of 125 cases of PGD were recorded (75% female) compared to 2,271,523 births (49% females).

TRABS >10x ULN
A total of 50 cases of PGD were recorded (74% female) with an average TRAB level of 36,28 (10-66 mul/L)

Conclusions
This was the first population-based study that analysed the impact of seasonality of MOB in the incidence of PGD. Despite a trend to a higher incidence of PGD in children born between September and April, no uniform seasonal pattern of MOB in PGD was observed in this sample of the Portuguese population either in the whole cohort or in the subgroup with higher TRAB titers.

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References
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