**SUMMARY**

Objective: Aggravation of autoimmune diseases due to a rebound reaction to the pregnancy-associated immune changes is common during the postpartum (PP) period. Previous studies demonstrated that up to 45% of women developing Graves' disease (GD) in the childbearing age had a PP onset of disease. Thus, the PP period was identified as a major risk factor for GD onset.

Design: Aim of study was to evaluate the role of the PP period as a risk factor for GD occurrence.

Methods: The reproductive histories of 291 consecutive GD patients (165 patients in the childbearing age and 126 in the non-childbearing age) were collected retrospectively.

Results: The rate of PP onset of GD in all patients with at least one successful pregnancy was 10% and 20% when only patients in the childbearing age were considered. In the entire cohort of GD women, independent of their age and parity status (i.e. the number of successful pregnancies), the rate of PP onset of GD was 7.2%. The relative frequencies of the rate of PP onset of GD were similar in relation with increasing parity. The rates of false negative (nulliparous) and false positive (parous non-childbearing + childbearing with a non-PP onset of GD) were estimated. The positive predictive value of the PP period for the onset of GD was less than 10%.

Conclusion: The results of the current study would not support a role for the PP period as a major risk factor for de novo occurrence of GD.

**COMMENT**

Most autoimmune thyroid diseases undergo a partial remission during pregnancy, resulting from the ‘down-regulation’ of the Th-1-mediated effector arms of the immune system. Conversely, the postpartum (PP) period is characterized by an immunological rebound reaction that accounts for the aggravation and/or frequent new onset of autoimmune thyroid disorders. Present article is an interesting study on the temporal – and perhaps also the physio-pathological – role of the PP period on the onset of Graves’ disease (GD).

The authors reviewed retrospectively the medical history of 291 consecutive female patients with GD (mean age: 40 years). In women who had – at least – one successful pregnancy, the overall rate of PP onset of GD was ~10%. When the analysis was restricted to those women in the childbearing age with at least one successful pregnancy, the rate of PP onset of GD increased to 20%. The conclusion of the present study does not support a role for the postpartum period to act as a major ‘triggering’ factor for the de novo occurrence of GD in young women.
In our own experience of similar cases in Brussels, we had reached – and published – similar conclusions almost ten years ago, having found a 15% overall rate of PP-onset of GD. Most articles showing an elevated rate of GD onset in PP originate from Asia, and particularly Japan, where authors have reported a rate of PP-onset of GD that reached as much as 40-50% of their cases.

The authors try to explain the discrepancy between their results and those of other studies that showed a higher rate of PP-onset of GD. Five possible mechanisms were discussed: 1) the role of the iodine nutritional status (moderately low in Italy while elevated in Japan, USA, etc.); 2) the role of ethnic differences; 3) the fact that some of earlier studies included only women who developed GD in the childbearing age, a bias which may have increased the relative statistical weight of the postpartum period; 4) the use of insensitive TSH-receptor antibody measurements in older studies, with possible misclassification of some patients; and finally 5) the possibility that the reduced size of Italian families in the last 2 decades may play a role since one might consider that some of the nulliparous women in present work might have developed GD during the PP period, had they ever been pregnant. Such arguments are clever thinking and appear valid, but are nevertheless insufficient (probably) to explain fully the wide discrepancies observed between different studies on this topic.

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See Figure below

Figure 1 Relative frequencies of GD developing in the PP period or in the non-PP period in relation to the number of successful pregnancies. No significant difference in the rates of a PP onset of GD in relation to increasing parity was observed in patients with at least one successful pregnancy.