Topic: **POSTPARTUM THYROIDITIS**

Title: Prevalence of postpartum thyroid dysfunction: a quantitative review.

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SUMMARY

Background: Estimates of the prevalence of postpartum thyroid dysfunction (PPTD) vary widely because of variations in study design, populations, and duration of screening.

Objectives: The objective of the authors was to estimate the prevalence of PPTD among general and high-risk women, across geographical regions and in women with antithyroid peroxidase antibodies (TPO-Ab).

Study: The authors conducted a systematic review and pooled analysis of the literature published between 1975 and 2004, simultaneously accounting for sample size, study quality, percentage follow-up, and duration of screening. Data sources were MEDLINE and the bibliography of candidate studies. Two reviewers independently extracted data. Of 587 studies identified, 21 articles, comprising 8081 subjects, met the study criteria.

Main Results: The pooled prevalence of PPTD, defined as an abnormal TSH level, was 8.1 % for the general population (95% CI: 6.6%-10.0%). The risk ratios for the development of PPTD among women with TPO-Ab, compared to women without thyroid autoimmunity features, ranged between 4 and 97, with a pooled risk ratio of 5.7. Global prevalence varied from 4.4% in Asia to 5.7% in the USA. Prevalence among women with type 1 diabetes was 19.6%. PPTD occurs in 1 of 12 women in the general population worldwide, 1 of 17 women in the USA and is 5.7 times more likely to occur in TPO-Ab positive women.

Conclusion: The high prevalence may warrant routine screening for TPO-Ab, but the benefits, cost, and risks related to subsequent therapy must be weighed.

COMMENT

Postpartum thyroiditis (PPT) was originally described 25 years ago, in a seminal article published by Nobu Amino in the NEJM. Since then, a large number of studies have extended our knowledge on the prevalence, the pathogeny, the clinical consequences and diseases (such as psychiatric manifestations) associated with this syndrome. Today, we live with the notions that PPT occurs in approximately 50% of women who have positive thyroid antibodies, that women with diabetes have a significantly higher risk, and that PPT has a strong tendency to reappear (after a subsequent pregnancy) in women who presented a first episode of PPT (after a previous pregnancy). Clinical manifest-ations are often mild or absent. Typically, a series of thyroid dysfunction patterns can be observed, from early transient

thyrotoxicosis only, to thyrotoxicosis followed by hypothyroidism with spontaneous recovery later on, to transient hypothyroidism only, and finally to hypothyroidism that becomes permanent (in 10-15% of cases). Even though often mild clinically, PPT is also associated to more severe presentations of either hyper- or hypothyroidism, although the hypothyroid form is more common. The main question is how to diagnose PPT and how to predict who is at risk of having PPT?

In the present analytical review, the first striking finding was the large number of articles identified in the literature (almost 600), although only a minority of studies (< 5%) fulfilled the criteria for analysis. The study confirmed the wide geographical variability of the prevalence of PPT and underscored some reasons explaining the variability: sample size, quality of study, percentage of follow-up, duration of screening. I would also tend to include the methods used for screening (such as measurement of TPO-Ab alone or with TG-Ab) and the timing of serum TSH screening since an abnormal TSH was the criteria used for the diagnosis. In PPT, we are dealing with a syndrome linked to the thyroid repercussions of a rebound in thyroid antibody production, after the immunosuppressive effect of pregnancy has faded away. Thus, abnormalities in serum TSH may be extremely brief and the timing of TSH measurements (say, every month during a 6-month period versus only once at 6 months postpartum) may lead to completely different results. The second important findings (not new but highly confirmatory) were the prevalence of PPT close to 10% in the general population, its 6-fold increase in women with positive TPO-Ab, and its 2-3-fold increase in women with type 1 diabetes. Finally, the authors advocated (albeit cautiously) the utility of systematic screening for PPT but omitted to present valuable algorithmic approaches for such screening to reach maximal efficacy.
(***Daniel Glinoer, M.D.; Ph.D.***)

See Figure below

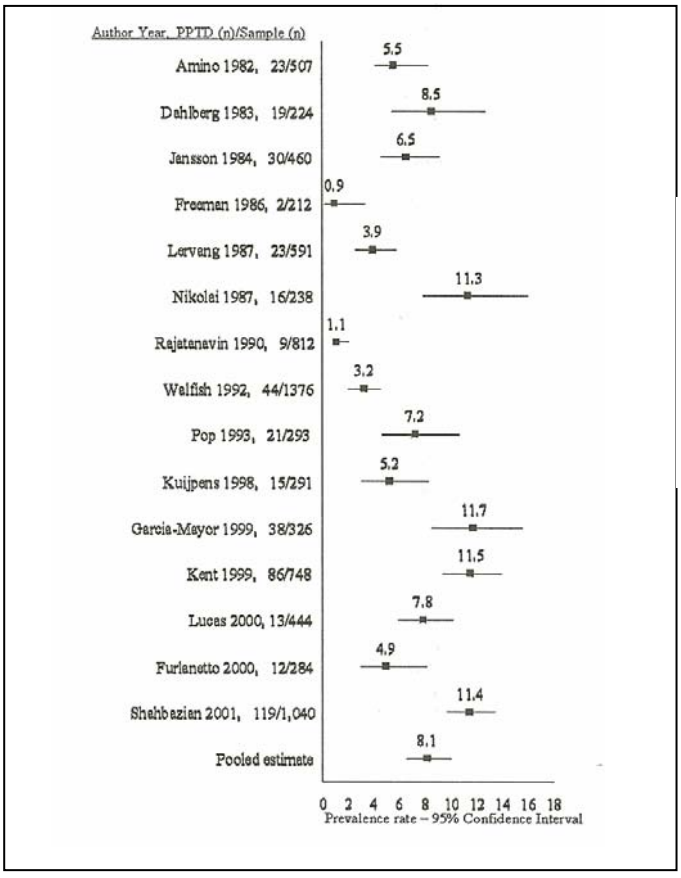

FIG. 1. Prevalence of postpartum thyroid dysfunction in the general population from 15 studies and pooled estimate weighted by sample size. Prevalence estimates and 95% confidence interval from 15 studies conducted in the general population. Sample size and the total number of women with postpartum thyroid dysfunction are also shown. The pooled estimate represents a weighted prevalence and 95% confidence interval based on the sample size and inverse variance of each individual study.