

The course of chronic autoimmune thyroiditis in pregnant women during iodine and selenium therapy

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INTRODUCTION, OBJECTIVES

Introduction. In iodine deficient regions maternal iodine supply is indispensable for the normal development of the fetus, but it might aggravate autoimmune thyroid diseases in the mother during pregnancy and postpartum. Selenium might be beneficial in these thyroid diseases by defending against the harmful effect of iodine on maternal thyroiditis.

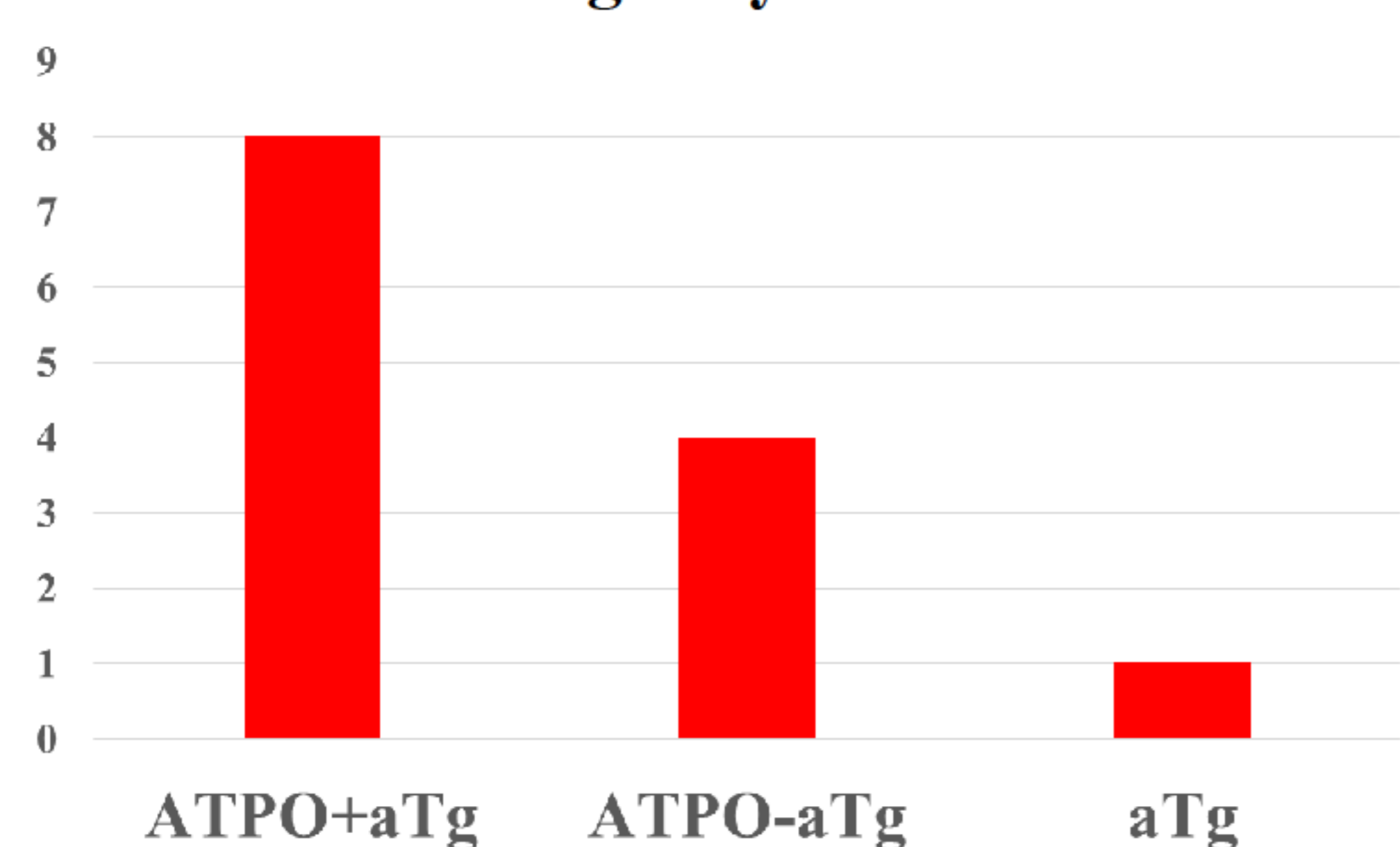
Objective: to study the course of Hashimoto's thyroiditis in pregnant women, under combined therapy with L-thyroxin, selenium and iodine.

MATERIAL AND METHODS

In 13 pregnant women with chronic autoimmune thyroiditis we measured TSH, free-T4, anti-thyroid peroxidase-antibody (TPO-Ab), anti-thyroglobulin-antibody (Tg-Ab), serum selenium and urinary iodine concentration in the I-II trimester. Then l-thyroxin, selenium and iodine treatment was initiated, and thyroid function and the level of mentioned antibodies were followed in the IIIrd trimester and in the postpartum period.

RESULTS

Fig. 1. Distribution of high thyroid antibodies in our cases



The course of thyroid antibodies during pregnancy and postpartum period

Fig 2. The variation of mean-TPO-Ab (mIU/L) during pregnancy

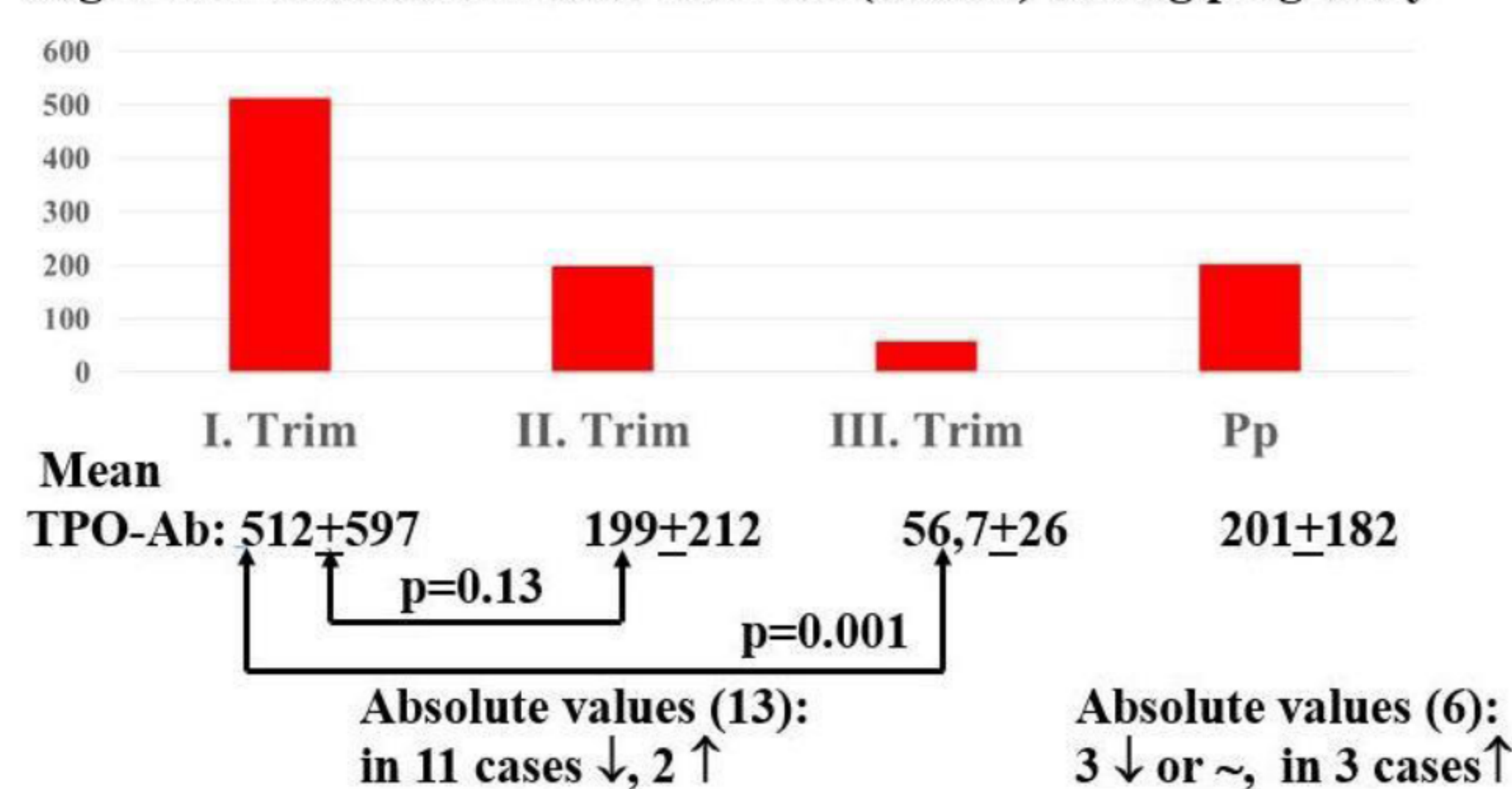


Fig. 3. The variation of Tg-Ab (mIU/L) during pregnancy

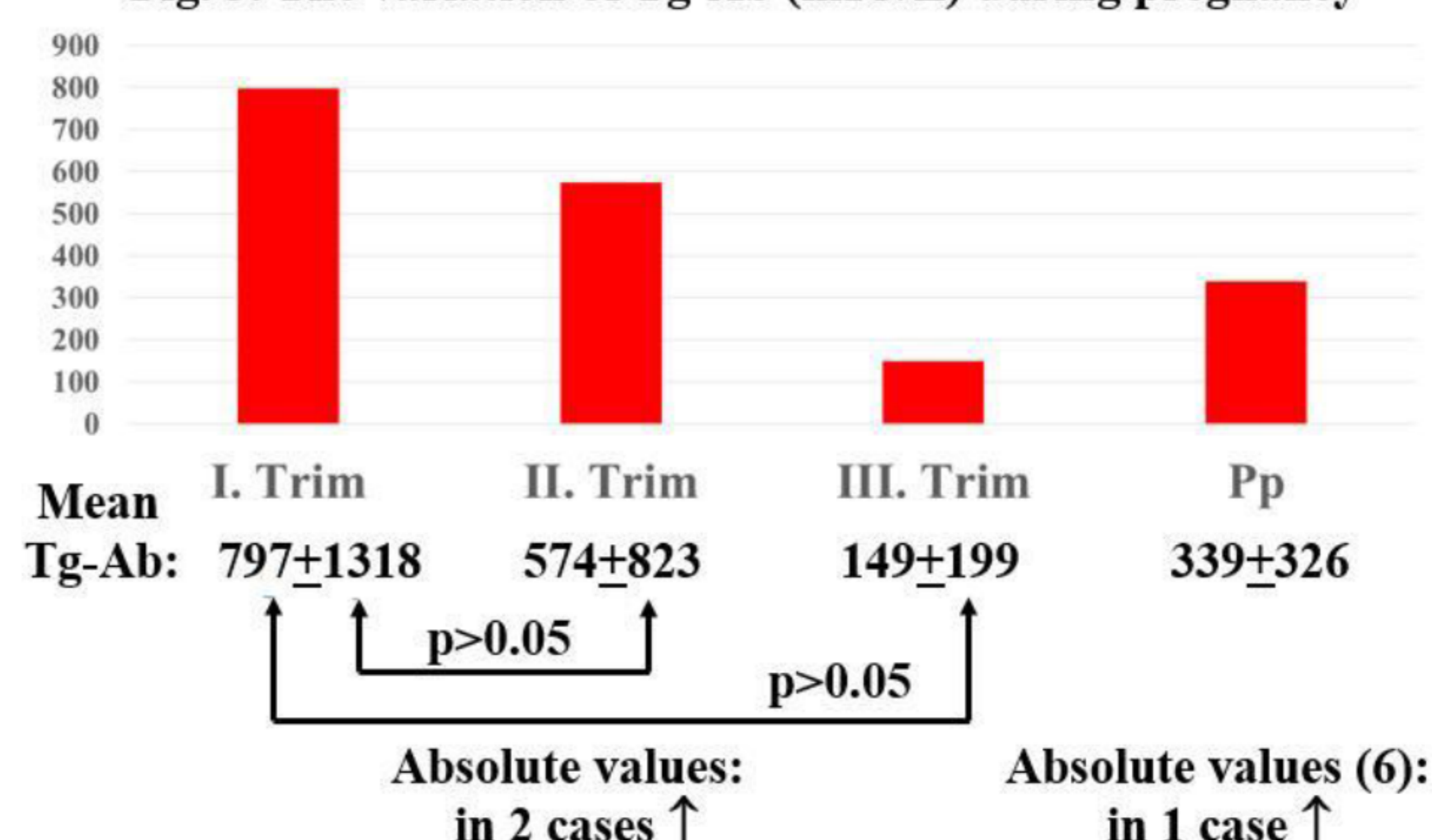
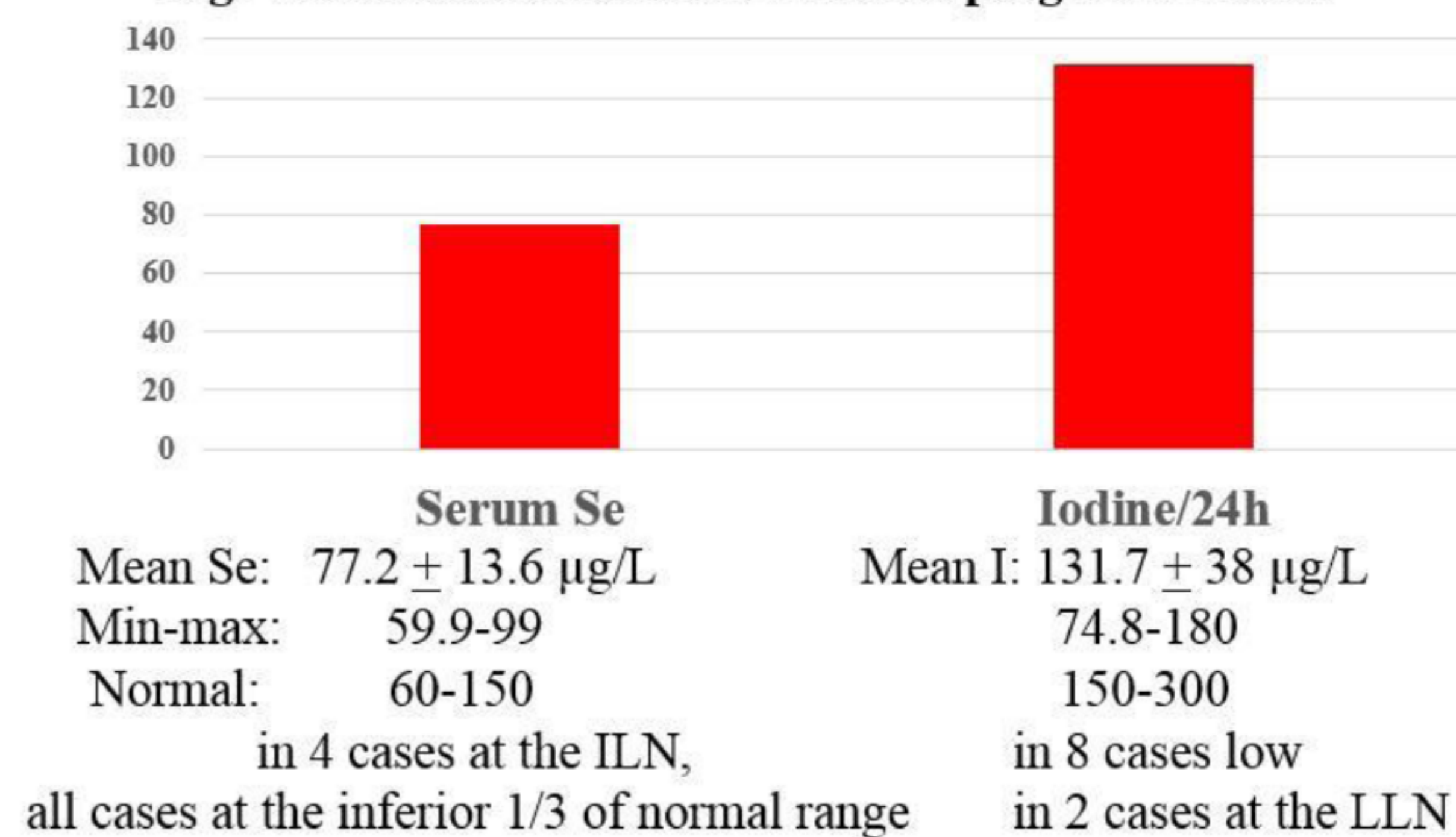


Fig. 4. Selenium and iodine status in pregnant women



All women received l-T4, and we combined to this iodine (100-200 microg/day) and selenium (50-200 microg/day). In all cases the level of thyroid antibodies decreased gradually during pregnancy, moreover in two cases it became normal, but after delivery all began to increase. Postpartum overt thyrotoxicosis developed in three cases (25%), which improved spontaneously within 2 months (meanwhile iodine was reduced or stopped, and selenium continued).

CONCLUSION

Despite universal salt iodization implemented since 2002, iodine deficiency was detected in considerable part (8/13) of pregnant women with chronic autoimmune thyroiditis, requiring iodine supply. Combined therapy with L-thyroxine, selenium and iodine did not increase the level of thyroid autoantibodies during pregnancy, moreover it was decreased. Conversely, their level increased gradually in the postpartum period, when the maternal immunity return to pre-pregnant state, and in 25% of the cases overt thyrotoxicosis developed.

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