Prevalence of Thyroid Disorders in Pregnancy in Northern Algeria

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Abstract

Background: Iodine is a trace element whose adequate intakes are essential during pregnancy to promote the correct growth and development of the fetus. Iodine deficiency is the cause of several disorders in foetal development and thyroid disorders during pregnancy is associated with an increased risk of miscarriage or premature birth. The aim of this study was to assess the iodine status and thyroid function of pregnant women (PW) in northern Algeria.

Methods: Healthy PW were recruited from an urban area (Algiers). Spot urine and venous blood samples were collected to assess iodine status (urinary iodine concentration, UIC) and serum thyroid hormones (TSH, FT4) and anti-thyroid peroxidase antibodies (TPO-Ab) concentrations.

Results: The median UIC for the PW (n=172) in Algiers was 246,74µg/L, 244,68 µg/L and 220,63µg/L respectively during the first, second and third trimester of pregnancy. Mean TSH, FT4 concentrations were within reference ranges in all groups of women. Among PW, 72.7%, 75.4% and 75.5% in the first, second and third trimester were TPO-Ab+. Among PW, 14%, 10% and 10% in the first, second and third trimester, respectively, with TPO -Ab+ had subclinical hypothyroidism. An analysis of the variations in the levels of the serum parameters (FT4, TSH and anti-TPO antibodies) was analyzed according to the CUI intervals admitted and show that these marker are predictive of thyroid function.

Conclusion: In northern Algeria, median UICs indicate iodine sufficiency in PW. About 75% of PW are TPO-Ab+ and the prevalence of subclinical hypothyroidism is high.

Keywords

Thyroid, pregnant woman, urinary iodine, subclinical hypothyroidism.