

Prevention Of Iodine-induced Thyrotoxicosis In A Population Of Women Of Reproductive Age In Rural Area Of Algiers

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Abstract : Background: Iodine is an important trace element for the functioning of the thyroid gland, whose highest daily intake comes from iodized table salt. It is abundant in the aquatic environment and the ocean space. Excessive intake of this trace element can lead to dysfunction of the gland leading to thyrotoxicosis. The aim of the work is to determine the concentrations of urinary iodine and TPO antibodies in a population of women of reproductive age in the region of Tizi Ouzou. Methods: Healthy women of reproductive age (n= 150) were recruited from a rural area in Tizi-Ouzou. Urine and venous blood samples were taken to assess iodine status (urinary iodine concentration (UIC) and anti-TPO antibodies). The determination of UIC and TPO antibodies was carried out by the modified sandell kolthoff method and radio immunological method, respectively. Results: Ten (6%) women of reproductive age had inadequate iodine intakes causing severe iodine deficiency (CUI < 50 µg/L), one of the two women had positive TPO-anti. Insufficient iodine intake causing moderate or mild deficiency and positive TPO antibody titers were observed in two women (2%). Whereas ninety-seven (58%) women had sufficient iodine intakes. Fifty-one (34%) women of reproductive age recruited at Tizi Ouzou had an excess of iodine and positive mean values in anti-TPO antibodies indicating high exposure to this trace element. Conclusion: the results showed that exposure to excess iodine could be the cause of some thyroid diseases such as thyrotoxicosis and thyroid autoimmunity in women of reproductive age in Tizi Ouzou. These results indicate that the prevention of iodine-induced toxicity is necessary through the conduct of dietary surveys to verify the levels of iodine contained mainly in household table salt.

Keywords : UIC, thyrotoxicose, women of reproductive age, thyroid autoimmunity

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