Evaluation of iodine sufficiency in school children of torbathaydareyeh cite, province 2013

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Abstract

Background and aim: Iodine deficiency accounts for a group of diseases such as Endemic goiter, hypothyroidism, Kirtinism and congenital anomalies. This study was carried out to monitor the national program for preventing iodine deficiency in 8-10 year old students in 1392 in Torbat haydareyeh city.

Materials and Methods: In this cross-sectional survey, 487 students of both sexes, aged from 8-10 years were selected from urban and rural areas through cluster sampling. Urine samples were obtained and urinary iodine measured based on cholorimetery and acid digestion related to guidelines of Department of Endocrinology and Metabolism.

Findings: The urinary iodine excretion median in evaluated students was 21 micrograms per deciliter and this amount in 62% population was between 10-30 micrograms per deciliter. Urinary iodine median of rural and urban students was 22 and 20 micrograms per deciliter, respectively that there was significant difference between these groups. In addition the urinary iodine median levels in boys and girls were 20 and 21 micrograms per deciliter that there was no statistically significant difference. Urinary iodine median in different regions are not the same and there was no significant difference in different regions. Findings of this study show that the urinary iodine median in students is desirable and higher than the national average.

Conclusions: In this study, the urinary iodine excretion median is 20 micrograms per deciliter which indicates the absence of iodine deficiency in Torbat. The important issue in this study is that despite increasing urinary iodine median among the students as iodine deficiency correction index, urinary iodine median in 20% of students is less than 10 micrograms per deciliter. Therefore it is necessary to educate families for using food sources containing iodine such as eating fish at least twice a week and using refined iodized salt to reduce undesirable amounts of urinary iodine median.

Keywords: students goiter, iodine deficiency disorders, urinary iodine

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