Serum zinc levels and goiter in Iranian school children.
Sanjari M, Gholamhoseinian A, Nakhaee A.

Abstract
Iodine deficiency has been shown to have high prevalence in Iran despite sufficient iodine supplementation. Zinc deficiency may also contribute to the pathogenesis of endemic goiter. The aim of this study was to compare serum zinc level in Iranian school children with and without goiter. A cross-sectional study was performed among urban children aged 8-12 years in city of Kerman, Iran. A multistage proportional to size cluster sampling method was used to screen 8055 subjects out of 78,927 students. After the screening phase, serum and urine specimens of randomly selected 1192 students were evaluated for serum zinc levels and urinary iodine excretion and compared in goiterous and non-goiterous children. Serum zinc level was 5.94 ± 4.92 μg/l in goiterous children and 2.14 ± 2.5 μg/l in non-goiterous children but no significant difference was found between the groups (p=0.01). But urinary iodine excretion was significantly (p<0.001) lower in goiterous children (5.70 ± 2.9 μg/l in goiterous children and 6.26 ± 2.9 μg/l in non-goiterous children). This study showed that serum zinc level in goiterous and non-goiterous children is not different and zinc deficiency is not a risk factor for endemic goiter in this population.

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