

Abstract

Both iodine deficiency and iodine excess are health problems. Because of high excretion and high demand of iodine during pregnancy even mild iodine deficiency causes health problems to pregnant women such as still births, birth defects, abortions and low physical and mental development of new born. Best tool to identify iodine nutrition in a population is still problematic. The aims of present study were, to assess iodine status of pregnant women using two indicators namely urinary iodine excretion and urinary iodine to creatinine ratio and to assess knowledge, attitudes and practices (KAP) related to of iodinated salt. Sample of 215 mothers were selected for the KAP survey. Among them 85 women whose age less than 45 years, in the first trimester were selected for the urinary iodine determination. Urinary iodine and creatinine were measured using Sandell Kolthoff reaction and Jaffes' reaction respectively in a casual urine sample. Median urinary iodine concentration was 207.17 μ g/l (range 74 – 724 μ g/l) while median creatinine concentration was 0.56 g/l (range 0.02 – 4.02 g/l). Mean iodine to ceatinine ratio was 315.16 μ g iodine / g creatinine. According to urinary iodine excretion 4.7% of pregnant women had mild iodine deficiency, and 18.8% had excess iodine levels. Urinary iodine to creatinine ratio indicated that 9.8 % mothers had iodine deficiency. No significant correlation was found between two indicators. KAP survey showed that 67% of them were aware that the iodine deficiency is the reason for goiter and 51% of women believed that iodinated and common salt had a difference in composition. Majority mentioned that iodinated salt differ from common salt because it contain iodine. Only 50% of respondents use salt without washing and 45% added salt before cooking. There was no significant association between iodine status and KAP of iodinated salt usage. Although overall knowledge on iodinated salt of the study population was not satisfactory, their practices were satisfactory. Urinary iodine to creatinine ratio may not be good bio marker to assess iodine status of community due to reported high individual variation of creatinine. In conclusion, overall iodine status of pregnant women of first trimester in the studied area was sufficient.