

Wayamba University of Sri Lanka



Proceedings
Wayamba University of Sri Lanka
WinC 2016



19 - 20 August 2016

Iodine status and its association with knowledge and practice on consumption of iodized salt among pregnant mothers in Jaffna district in Sri Lanka

¹Yoganathan T, ²Arasaratnam V, ³Hettiarachchi M and ³Liyanage C

¹Nuclear Medicine Unit, Faculty of Medicine, University of Jaffna, Sri Lanka;

²Department of Biochemistry, Faculty of Medicine, University of Jaffna, Sri Lanka;

³Nuclear Medicine Unit, Faculty of Medicine, University of Ruhuna, Sri Lanka

Corresponding author: thiruyoganathan@yahoo.co.in

This study was carried out to find the iodine status and its association with knowledge and practice on consumption of iodized salt among pregnant mothers at third trimester in Jaffna District in Sri Lanka. Four hundred and seventy seven pregnant mothers were randomly selected from six Medical Officer of Health (MOH) divisions out of twelve in Jaffna District. Maternal serum thyroid stimulating hormone (TSH), urinary iodide concentration (UIC) and the knowledge and practice on consumption of iodized salt were assessed. Among the 477 pregnant women, average age, weight, height and gestational age were 28.95 (\pm 5.46) years, 63.02 (\pm 11.56) kg, 154.39 (\pm 6.00) cm and 39.33 (\pm 1.37) weeks, respectively. Mothers had no formal education, grade 1-5, grades 6-11, Grade 12-13 and degree and above were 0.2 % ($n=1$), 9.6 % ($n=46$), 58.9 % ($n = 281$), 23.9 % ($n = 114$) and 7.3 % ($n = 35$), respectively based on the Sri Lankan educational standards. Of the total number of mothers, 82.5 % ($n = 393$), 2.5 % ($n = 12$) and 15.0 % ($n = 72$) used iodized salt, iodized and normal salt and unaware of iodized salt, respectively. Maternal median UIC was 140.0 $\mu\text{g/L}$. Of the 477 mothers 65.1 % ($n = 311$) had UIC less than 150.0 $\mu\text{g/L}$, while 22.7 % ($n = 109$) had accepted level (150 – 250 $\mu\text{g/L}$) and 11.7 % ($n = 57$) had UIC greater than 250.0 $\mu\text{g/L}$. Among the iodine deficient mothers (UIC < 150 $\mu\text{g/L}$), 74.0 % ($n = 231$) had educational level below GCE (O/L) and 64.0 % ($n = 199$) of iodine deficient mothers added iodized salt before cooking and rest of them added it after cooking by all different methods. Further, 66.0 % ($n = 205$), 21 % ($n = 65$) and 13 % ($n = 41$) of iodine deficient (UIC < 150 $\mu\text{g/L}$) pregnant mothers added iodized salt directly, mixed with water and washed with water for cooking, respectively. Among the hypothyroid mothers [serum TSH > 5.2 mIU/L, ($n = 16$)], 67.0 % added iodized salt after washing. Based on the recommendation of World Health Organization, prevalence of iodine deficiency of the pregnant mothers in Jaffna District was 65.1 %, which indicates iodine status was not at optimum level. Further, maternal iodine deficiency was associated with poor educational attainment in this study population and even educated mothers also lack the knowledge on correct usage of iodized salt.

Keywords: Pregnancy, Knowledge, Urinary iodine concentration