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PRATHAN WONGTALA: IODINE DEFICIENCY DISORDERS (IDD);  
THE EVALUATION OF ITS ELIMINATION IN KHAMCHA-I, MUKDAHARN.  
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The evaluation of iodine deficiency disorders (IDD) using WHO/UNICEF/ICCIDD indicators was performed in 543 primary schoolchildren of both sexes and aged 6-14 years in Khamcha-I District, Mukdaharn Province. In pre-test the prevalence of goiter, an indicator of IDD was checked and found to be 4.58 % by palpation and 19.08% by ultrasound in the placebo group (Namteung, n=131). The prevalence of goiter was found to be 20.0% by palpation and 44.71 % by ultrasound in the treated group (Nong-ean-dong, n=85). The treated group showed moderate sign of IDD by palpation, but severe signs by ultrasound. The placebo group showed no signs of IDD by palpation and mild signs by ultrasound. The discrepancy between ultrasound and palpation was 14.5 % in the placebo group and 24.7% in the treated group. The percent of serum TSH at > 10 mIU/L showed no IDD problem in both the placebo group (0%, n=68) and the treated group (0.07%, n=139). The median urinary iodine level showed mild IDD in both groups which were 62.3 and 56.6  $\mu\text{g/L}$  in the placebo group (n=87) and the treated group (n=117) respectively.

One year after receiving iodated water (150  $\mu\text{gI/day}$ ) in the treated group and water without iodine fortification (median iodine= 25.43  $\mu\text{g/L}$ ) in the placebo group, the incidence of goiter by ultrasound was decreased to 8.33% and to 9.73% respectively. When compared with palpation, the incidence in the treated group was also decreased to 13.09% but slightly increased to 5.31% in the placebo group. A discrepancy between ultrasound and palpation was also found 4.42% in the placebo group and 4.76% in the treated group. It is indicated that palpation is relatively inaccurate for assessing the prevalence of goiter in the iodine deficiency area. In contrary, it can be applied to assess the prevalence of goiter in iodine-replete areas (goiter prevalence <5%). Serum T<sub>3</sub>, T<sub>4</sub> and TSH of pre-and post-test in both groups were within the normal limits. The median urinary iodine levels in the treated group were higher than normal value of 126.6  $\mu\text{g/L}$  after receiving iodated water for 3, 6, 9 and 12 months. In the placebo group, median urinary iodine was also increased from the pre-test but lower than the normal value.

To eliminate IDD in primary schoolchildren, iodine prophylaxis program should continue. Monitoring and evaluation of IDD by thyroid gland palpation and urinary iodine excretion should be done once a year.