THE CORRELATION OF IODINE AND TIOSIANAT LEVEL, AND FOOD CONSUMPTION PATTERN TO THE INCIDENCE OF GOITRE AMONG SCHOOL AGE CHILDREN IN ENDEMIC AND NON-ENDEMIC AREA

Abstrak :

ABSTRACT
The objective of this study was to know the relation of iodine and thiocyanate with the thyroid occurrence in non-endemic area (Countryside Sumbersari) and endemic area (Countryside Arjasa) in Jember. This research was observational study with comparative design. For this purpose, 30 school age children were selected as samples, 15 samples were thyroid patient group in endemic area and non 15 were thyroid patient group in non-endemic area. Goitre identified by palpation method. The rate of urine iodine and thiocyanate were measured from blood dan urine samples. Data was collected by using 24 hours recall method, food frequency questionnair, and cerium method in laboratory to measure urinary excretion iodine and thiocyanate urine. Iodine content in drinking-water and land were measured using AAS. Data was analyzed using Logistics regression.
The range of UEI (Urinary excretion of iodine) was 82-590 ug/L (Median 245 ug/L). Most school-children were in normal iodine status. Thiocyanate had the character of goitrogen (Mean 3,5 ug/dl). The average intake of energy, carbohydrate and protein were sufficient within RDA, but the average intake of fat was inadequate compared to RDA.
This research conclude that thyroid occurrence is caused by the high level of thiocyanate as well as lowering sufficiency consume the energy and fat. Hence, further research should be held using more complete indicator, especially to know the source of thiocyanate.

Keyword :

Goitre, Iodine, Thiocyanate, endemic-non-endemic area.