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Analysis Of Nutrient Intake that Affected Thyroid Function Of Pregnant Women in Mercury Contaminated Coastal Area

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Background: Nutritional status is very important in conserve normal thyroid function. Nutritional status require an adequate intake. Several nutrients have important role in thyroid hormone production and metabolism, those are energy intake, protein, vitamin A, vitamin D, iron, zinc, copper and iodine itself. Pregnant women is a population with high risk of nutritional deficiencies. Artisanal small scale gold mining is a location with mercury contaminant which influence nutrient intake and its metabolism. The objective of this research was to analyze the adequacy of nutrient required in thyroid function

Methods: This was a community based research. 100s pregnant women in coastal area which contaminated by mercury were enrolled. All participants fulfilled inclusion criteria those were lived in mercury polluted area for more than 6 month and in at least second semester period of pregnancy. Nutrient intake assessed using recall 24 hours; nutritional status by measured anthropometry. Comparison of nutrient intake measured using 24 hour food recall between group and recommended daily allowance was tested by using one way ANOVA

Results: Nutritional status of 14.2% pregnant women experienced chronic energy malnutrition. Mean of energy intake was 1448.57 Ccal, protein intake was 56 gram, vitamin A intake was 1046.19 μg , vitamin D was 1.89 μg , Iron intake was 8.39 mg, Zinc was 4.51 mg, Copper was 1.01 mg and iodine was 66.89 μg . All nutritional intake did not meet RDA value except vitamin A. Iodine, the direct nutrition which was affected thyroid hormone production has an intake Of 30.67 % of RDA. Iodine intake among group were significantly lower than RDA value (p 0.000)

Conclusion: Nutritional intake of nutrients involved in thyroid function did not meet recommended daily allowance for pregnant women lived in coastal area contaminated by mercury.

Keywords: nutrient intake, pregnant women, thyroid function, coastal and mercury polluted area, 24-hour food recall, recommended daily allowance

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