



A possible geogenic cause of goiter occurrence in the coastal environment of s-w Nigeria: a case study from, Badagry, Lagos

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Goiter and other thyroidal dysfunctions affecting humans occur in almost all the countries in the world regardless of age, sex and race. Several factors have been proposed in the etiology of goiter. Among these factors; variable concentrations (too high or too low) of iodine, selenium deficiency and goitrogens are considered to be the common causes (Eastman and Zimmerman, 2017)

In Nigeria, some studies established that the prevalence of endemic goiter is due to iodine deficiency, which occur mainly in the metamorphic and igneous granitic basement complex. No cases of goiter was reported in the coastal and sedimentary environment due to sufficient level of iodine (Lar, 2013). However, recent studies from some parts of south-western Nigeria revealed occurrences of goiter in sedimentary and coastal environments. Based on this, the occurrence of goiter and its link to the geological environment is still uncertain.

Therefore, the purpose of the present study is to investigate the iodine and other possible elements concentrations in drinking water and their possible impacts on the prevalence of the goitre disease in the sedimentary and coastal area of Lagos.

The results obtained so far from thirty water samples show iodine content ranging from $150\mu\text{g/l}$ to $300\mu\text{g/l}$ in 55% of the water samples analyzed. These values are considered to be high when compared with WHO daily consumption value of $150\mu\text{g}$ for adults. Based on these results we believe that high intake of iodine could be one of the possible factors responsible for goiter cases in coastal areas of Lagos. Further analysis are in the process of being conducted in order to confirm this hypothesis.

KEYWORDS: Goiter, Iodine, Nigeria, Lagos, Coastal and Sedimentary.

References

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