

THE INCIDENCE OF FOLATE AND VITAMIN B₁₂ DEFICIENCY AMONG ANAEMIC PATIENTS ATTENDING THE HAEMATOLOGY CLINIC, KANDY

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Folate deficiency is widespread throughout the world and is known to cause serious health problems, one of which is megaloblastic (macrocytic) anaemia. Even though megaloblastic anaemia is common in Sri Lanka, no study has assessed whether it is mainly due to deficiency of folate or vitamin B₁₂. Hence, in Sri Lanka, patients diagnosed as having megaloblastic anaemia, are treated with both vitamin B₁₂ and folic acid. (Without their serum folate and vitamin B₁₂ levels assessed).

The objective of this study was to find out the incidence of folate and vitamin B₁₂ deficiency among anaemic patients attending the Haematology clinic, Kandy.

The serum and red cell folate levels of 200 anaemic patients and 135 non-anaemic subjects were analysed. The serum vitamin B₁₂ levels of 100 patients were analysed. Folate levels were assessed using a microbiological technique whilst serum vitamin B₁₂ levels were assessed using a CEDIA vitamin B₁₂ assay kit, which uses an enzyme immunoassay technique.

In the case of non-anaemic subjects studied, the serum folate ranged between 3.5 – 22.5 ng/ml, with a mean value of 7.12ng/ml. In the anaemic subjects, the range varied between 1.2 and 21 ng/dl with a mean value of 3.24ng/dl. The difference between the mean values of the anaemics and non-anaemics was highly significant ($p < 0.0001$).

Among the 100 subjects studied, 10 (10%) were B₁₂ deficient, with concentrations less than 153 pg/ml, a value considered as the lowest limit of the normal concentration by the manufacturer of the B₁₂ assay kit. The values ranged between 77-1500 pg/ml with a mean value of 506.02 pg/ml.

148 (74%) patients had a serum folate level below 3.5 ng/ml, the lowest concentration in the non-anaemics whose red cell folate level was also normal. Only 10 patients had low serum vitamin B₁₂ levels.

The results indicate that folate deficiency is quite common among anaemic patients attending the Haematology clinic, Kandy, whereas vitamin B₁₂ deficiency is not that common.