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### Evaluation of serum vitamin B12 in Type 1 diabetes mellitus

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**Introduction:** Type 1 Diabetes Mellitus, an autoimmune condition is known to be associated with multiple co-morbidities. Vitamin B12 deficiency is a potential co-morbidity that is often overlooked in these patients. Defining the prevalence of low or deficient serum vitamin B12 levels in the diabetic population may aid physicians to consider screening for vitamin B12 levels in Type 1 diabetic patients and carry out further evaluations.

**Methods:** The cross sectional study was done by selecting 40 Type 1 Diabetes Mellitus patients from outpatient department (OPD) visiting endocrinology unit in Kanti children's Hospital. 30 healthy control groups were also selected based on inclusion/ exclusion criteria. Serum C-peptide, vitamin B12, creatinine, blood sugar level were assessed along with glycosylated hemoglobin in both groups. SPSS ver. 22 was used to analyze the data.

**Results:** The mean age of Type 1 Diabetic patients was  $10.44 \pm 3.68$  years, which included 21 male and 19 female patients. A total of 30 controls were also included in the study, males and females being equally represented. The mean age of control group was  $4.87 \pm 3.53$  years. The mean serum vitamin B12 level of the case was  $206.86 \pm 82.15$  pmol/L ( $280.37 \pm 111.34$  pg/ml). Among the population 40.0% i.e. 16/40 were found to be deficient and 37.5 % i.e. 15/40 were sub clinically deficient. Whereas the mean serum vitamin B12 level of the control group was  $341.36 \pm 135.99$  pmol/L ( $462.67 \pm 184.32$  pg/ml). Significant difference was noticed in the mean serum level of vitamin B12 between two groups.

**Conclusion:** This study demonstrated the presence of low serum vitamin B12 levels in Type 1 Diabetics. The routine screening for this condition along with confirmatory test and detail clinical examination could benefit the Type 1 diabetic patients. However, further studies on a larger population are must to strengthen this statement.

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