



كلية الطب – جامعة الفيوم
قسم الأطفال

البحث السادس

Assessment of Serum Level Vitamin D in Infants and Children with Down Syndrome

مكان وتاريخ النشر : مقبول للنشر في Middle East Journal of Medical Genetics. July, 2017

Abstract

Background: Vitamin D has multiple extra-skeletal functions. Down syndrome patients are at more risk of vitamin D deficiency due to multiple environmental and hormonal factors, so vitamin D supplementation plays a vital role in their lifestyle.

Objective: The aim of the study is to assess serum vitamin D level and to study the several factors that may affect its level in infants and children with Down syndrome.

Method: The study enrolled 50 children, 30 of them were diagnosed as Down syndrome (group I) and the other 20 were defined as control group (group II). Detailed systemic examination was performed to all participants. Anthropometric measurements including weight, height and head circumference were assessed. Blood samples were collected and evaluated for 25 (OH) vitamin D level.

Results: The mean serum vitamin D level was 30.65 ± 20.64 in group I compared to 55.80 ± 22.79 in group II with significant p value < 0.0001 . In Down syndrome patients, 6.7% were severely deficient (< 10 ng/ml), 53.3% had insufficient serum vitamin D level (10-32ng/ml) and 40% had adequate serum vitamin D level (> 32 ng/ml). In group II, only 20% had insufficient serum vitamin D level and 80% had adequate level.

Conclusion: Vitamin D deficiency and insufficiency were more prevalent in Down syndrome patients. Vitamin D insufficiency was also reported in control group which indicates that it is a common health problem even among healthy subjects. Diet rich in vitamin D, adequate sun exposure and vitamin D supplements prevent vitamin D deficiency.