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Effect of Vitamin D supplementation in patients of moderate asthma undergoing treatment with inhaled corticosteroids

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Background: Vitamin D is an essential nutrient with significant immuno-modulatory effects. There is potential for a protective role of vitamin D against etiopathogenesis of asthma and morbidity. This study evaluated the effect of vitamin D supplementation in patients with moderate asthma.

Aims & Objectives: To evaluate the effect of vitamin D supplementation on lung function improvement in patients of moderate asthma undergoing treatment with inhaled corticosteroids.

Material & Methods: An interventional prospective study. A total of 60 patients of moderate asthma were enrolled in the study and randomly divided into two groups of 30 patients each. Group A: placed on steroid based treatment regimen (formoterol 6 µg+budesonide 200 µg)+Vitamin D supplementation [60,000 IU/week for 8 consecutive weeks]. Group B: placed on steroid based treatment regimen (formoterol 6 µg+budesonide 200 µg) only, as control. The enrolled patients were followed up for 12 weeks and assessed for various parameters of disease severity, asthma control and improvement in lung function by using Asthma Control Test [ACT] questionnaire and pulmonary function tests (spirometry). Collected data was analyzed using available statistical software [spss ver 20.0].

Results: Statistically significant changes were seen in pre to post values of FEV1 [2.29±0.41 to 2.64±0.52], FVC [3.37±0.74 to 3.61±0.76] and FEV1/FVC ratio [68.44±5.04 to 73.49±3.52] in Group A as well as in Group B, i.e., FEV1 [2.28±0.48 to 2.65±0.53], FVC [3.36±0.68 to 3.58±0.76] and FEV1/FVC ratio [67.88±2.48 to 74.16±4.19]. However there were no significant differences observed in pre and post values of FEV1, FVC and FEV1/FVC ratio in between the two groups.

Conclusion: Vitamin D supplementation failed to show additional benefits in lung function improvement in adults with moderate asthma undergoing treatment with inhaled corticosteroids in the present study.

Biography

Rajendra Sharma is a Medical Doctor from Uttarakhand. He is a keen Research Worker and having his interest to learn further about newer development in pharmaceutical sciences. He has worked with pharmaceutical organization in different settings like clinical research, pharmacovigilance and product development before joining Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, Jolly Grant, Dehradun. He is currently a Tutor in Department of pharmacology, Himalayan Institute of Medical Sciences, Dehradun.

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