## Euro Biosimilars 2020 Euro Organic Chemistry 2020 Pharmacology 2020

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August 26-27, 2020

**WEBINAR** 

J Bioequiv Availab, Volume 12

## The possible association of VDR polymorphisms to the response of asthmatic children to Vitamin D supplementation

## Soha Farouk Elatrebi1, Aida Ahmed Said Guemei , Yasmine Amr Issa , Seham Zakaria Nassar, Mohamed Abougabal and Nabil Mohamed ElBahie

Faculty of Medicine, Alexandria University

The actions of Vit D are mainly mediated through Vit D receptors (VDR). Different trials studied the possible association between the VDR genetic variants, for e.g. ApaI and TaqI and asthmatic populations in different ethnic groups. During this study, patients were given a daily oral 600 IU of Vit D in addition to their inhaled corticosteroids for 3 months. 64% of the population showed a polymorphism of ApaI and 66.3% of TaqI including both homozygous and heterozygous polymorphisms. Based upon the clinical asthma control level improvement, the patients were categorized as responders (Rs); 62.1% and Non Responders (NRs); 37.9%. The genotypic distribution of both polymorphisms was significantly different between Rs and NRs . Low Vit D mean serum level was detected at the beginning of the study and was significantly increased after 3 months of Vit D supplementation. Pulmonary function tests (PFTs) results were also significantly ameliorated .While the Rs of different genotypic groups performed significantly better in the PFTs, there was no significant difference between the Vit D serum level between the Rs and the NRs before and after the intervention for the whole population. Daily low dose of Vit D supplementation was beneficial to the asthmatic children as 62.1% of the study population showed a favorable outcome while the role of these specific polymorphisms is not clear yet.

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