
Role of transforming growth factor beta $\text{tgf-}\beta 1$ in evaluation of atopic and non-atopic asthma

Ahmed Nabil Mohammed

TGF- β is suggested to play an important role in the pathogenesis of airway remodeling in asthmatic patients. TGF- β is particularly important, because it induces multiple effects in the same cell type or in different cells, depending on microenvironmental and cellular conditions. The present study aimed to evaluate the relation of TGF- β -1 to the pathogenesis of asthma and its relation to various risk factors and clinical parameters. The study involved 30 children divided into three groups. Group I (G I) included 10 patients with atopic asthma, group II (G II) included 10 patients with non-atopic asthma and group III (G III) included 10 healthy children and served as control. The demographic, clinical and laboratory parameters of the groups were reported and statistically analyzed. Regarding the demographic characteristics, it was found that asthmatic patients had significantly higher BMI when compared with healthy controls. Regarding the associated risk factors, it was found that asthmatic patients had significantly less frequency of breastfeeding than controls. However, the present study didn't find any associations between the occurrence of asthma and residence, parental history of asthma and parental smoking. As regards the laboratory findings in the present study, it was found that asthmatic patients had significantly higher TLC and eosinophilic % in comparison with healthy controls. Also, our research revealed significantly higher mean level of serum TGF- β -1 in asthmatic patients whether atopic or non-atopic when compared with healthy controls. In addition, we found that non-atopic patients had significantly higher levels of TGF- β -1. Further, we didn't find any associations between the various clinical and laboratory parameters and the serum level of TGF- β -1. In conclusion, TGF- β -1 is suggested to be a contributing element in the pathogenesis of asthma whether atopic or non-atopic. The distinct mechanisms by which it produces its effects are complex and interact with many pathways of asthma development.