

The Level of Serum immunoglobulins in Children suffering from Sinusitis

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Abstract

Background and objectives: Paranasal sinuses are the common place for infection in children and adults. Early and effective antibiotic treatment is necessary to reduce the infection period and mucosal injuries, and to prevent from the Involvements of orbit or CNS. This article aims to clarify the Serum immunoglobulins accompanying by Sinusitis in Children.

Material and Methods: the Subjects of this Cross-Sectional study were 400 patients with paranasal sinusitis confirmed by imaging techniques. The study was conducted in infectious and ENT Clinics of Rasoul Akram hospital in 2003-2004. We measured the Levels of serum immunoglobulins including IgG, IgM, IgA and IgE by standard radio-immunodiffusion test, and Compared with normal range of each age group. The data was analyzed by SPSS software (11.5)

Results: The Subjects aged 4.42 ± 2.62 are both male (70.7%) and female (29.3%). Maxilla is the most Common Sinus involved. Thirty-eight of them (95%) have increased IgG Level. Forty-four percent of children suffered from rhinosinusitis have been diagnosed with Immune-humoral disorders: the increase of IgE (N=9), Lack of IgA (N=3), decrease of Isolated IgG (N=2), decrease of both IgG and IgA (N=1) and Hyper IgM syndrome (N=3). There is Significant Correlation between different Immunoglobulins and duration of Sinusitis ($P < 0.05$).

Conclusion: The results of this study show that an increase of IgE is one of the most Common disorders in children suffering from Sinusitis and the incidence of immunity disorders is higher than the expected rate. Thus, we recommend the Immunologic assessment for Children Contracting with Sinusitis, esp. for protracted one.

Key words: Rhinosinusitis, Hypogamma Globulinemia, Resistant Rhinosinusitis, Serum Immunoglobulins