

21 **ASSESSMENT OF SERUM LEVEL OF ANTI-PSEUDOMONAS AERUGINOSA IMMUNOGLOBULIN IGG IN CHILDREN WITH CYSTIC FIBROSIS ADMITTED TO MOFID CHILDREN'S HOSPITAL IN 2013–2014**

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Background and aims: One of the most common reasons of mortality in patients with cystic fibrosis (CF) is lung infection; and *Pseudomonas aeruginosa* (PA) has the highest share. In children above 6 and adults with CF, cultures can be well-recognized due to the presence of expectorated sputum; but children under 6 years have not reliable sputum, so serological tests for PA sensitive antigens can be helpful. The aim of this study was to evaluate serum levels of IgG through PA infection in children and adolescent with CF; and to replace the sputum culture tests with this method.

Methods: In this cross-sectional study, Blood and sputum or throat samples were taken from 68 patients with CF. PA existence was studied in the samples. The variables including age, sex, and lung function tests were obtained. Then 3 serum antigens levels were determined by enzyme-linked immune sorbent assay (ELISA).

Results: The mean age of children was 7.4 ± 5.6 (ranging 23 to 0.5) years. Generally in CF patients, the percentage of PA infection increased in higher ages. Meaningful relationship was observed between the level of serum IgG in children with CF and positive sputum culture for PA.

Conclusion: Anti-PA antibodies can be early markers for diagnosis of PA infection, especially in young children who cannot expectorate. Due to the impact of age on CF patients with PA infection, PA early diagnosis can prevent lung damage and increases longevity and quality of life in this group of patients.