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Basal serum levels of immunoglobulins G, A, M, and E in the group of patients with cystic fibrosis at Hospital Infantil Universitario de San José Bogotá DC, in 2014

María Claudia Ortega-López,* Adriana Escobar Quintero, Diana Carolina Barrero Miranda****

ABSTRACT

Background: Patients with cystic fibrosis have poor lung function and chronic infections which impair the quality of life and are the leading cause of death. Hypogammaglobulinemia is associated with less severe lung disease; hypergammaglobulinemia with major lung impairment, presumably due to a hyperimmune response. **Objective:** Determine G, A, M, and E immunoglobulins serum levels in patients diagnosed with cystic fibrosis at Hospital Infantil Universitario de San José de Bogotá in 2014. **Material and Methods:** Case series of patients diagnosed with cystic fibrosis. Fifty three patients were included. Forty one samples of serum IgG, IgA, IgM, and IgE immunoglobulins were taken from patients without acute infectious disease, and who had not received gamma-globulin therapy or immunosuppressive therapy. Body mass index, lung function, bronchiectasis, and *Pseudomonas aeruginosa* colonization were assessed. **Results:** 51.2% of participants were male. The median age was 17.7 years; 58.5% of the patients had a normal BMI; the median FEV_1 was 67.9%. The frequency of bronchiectasis was 39%, 31.7% were colonized with *Pseudomona aeruginosa*. Most of the patients had normal immunoglobulin levels; low levels of IgG were present in less than 5% of the patients. Patients with high IgG had bronchiectasis in 85.7%. High IgA was mainly present in male between 10 and 20 years old, who also had the worst respiratory impairment. They also had a greater colonization for more than three months. Bronchiectasis was found in 85% of the cases and was colonized by *Pseudomonas aeruginosa*. **Conclusion:** Increase in immunoglobulins levels correlate with bronchiectasis and inversely with FEV_1.

Key words: Cystic fibrosis, immunoglobulins, inflammation, malnutrition, bronchiectasis, *Pseudomona aeruginosa*, FEV_1.

Abbreviations:
CF = Cyst fibrosis.
CFTR = Cystic fibrosis transmembrane regulator.
TNF = Tumor necrosis factor.
IRA = Instituto de referencia andino.
BMI = Body mass index.
CDC = Centers for Disease Control and Prevention.
FEV_1 = Volume in 1 second was determined.

* Pediatrics Line of Investigation, Hospital Infantil Universitario de San José, Pediatrics Service - Immunology and Allergology. Fundación Universitaria de Ciencias de La Salud Escuela de Medicina. Bogotá DC, Colombia.
** Pediatrics Specialization Program. Pediatrics Service - Facultad de Medicina Fundación Universitaria de Ciencias de La Salud - Hospital Infantil Universitario de San José. Bogotá DC, Colombia.