

SUMMARY OF THESIS*

RUBINSKY-ELEFANT, Guita - **Toxocaríase humana: avaliação dos níveis de anticorpos IgG, IgA e IgE anti-*Toxocara canis* e correlação clínico-laboratorial em pacientes submetidos à terapêutica.** São Paulo, 2004. (Tese de Doutorado - Instituto de Ciências Biomédicas da Universidade de São Paulo).

HUMAN TOXOCARIASIS: HUMORAL RESPONSE (IgG, IgA AND IgE) ANTI-*Toxocara canis* AND CLINICAL-LABORATORIAL CORRELATION IN PATIENTS FOLLOWING CHEMOTHERAPY

A serological follow-up was carried out in 27 children with toxocariasis (23 with visceral, 3 with both visceral and ocular manifestations and 1 with ocular toxocariasis, a total of 159 samples), treated with thiabendazole. The ages of the children varied from 1 to 12 years (average of 4.2 years), and the follow up treatment varied from 22 to 116 months (average of 65 months). The enzyme linked immunosorbent assay (ELISA) and Western blotting technique for the detection of specific IgG, IgA and IgE anti-*Toxocara* were standardized, using excretory-secretory antigen obtained from *Toxocara canis* second stage larvae culture. The avidity of specific antibodies IgG was also evaluated in both tests.

The sensitivity of ELISA IgG, IgA and IgE were 100%, 47.8% and 78.3% respectively, in visceral toxocariasis patients. The humoral immune response was stronger in these patients compared to those with ocular manifestations. Although 84% of the patients presented one or more parasites in feces, the number of parasites did not affect the specific humoral response. In the follow-up after treatment, the first isotype that showed significant differences in titers was IgE antibodies, in the first year. Specific IgA showed differences in the second year and specific IgG, in the fourth year after treatment. Although the decrease of IgG titers was observed, the levels still remained elevated for many years. All patients presented high avidity IgG antibodies, in both ELISA and WB tests, pointing to a chronic phase of the disease.

The WB technique was performed with gradient polyacrilamide gel (5-15%), showing a pattern of bands ranging from 29 to >205 kDa, with the predominance of the 29-38 and 48-54 kDa bands. WB-IgG showed the highest sensitivity (100%), followed by IgE (91.3%) and IgA (73.9%). The WB profile could be divided in two groups: a constant pattern of bands throughout the follow-up study and another that presented a decrease in reactivity to some bands. A decrease statistically significant was seen in the pattern of WB-IgG reactivity to bands >205 kDa in the third year and in WB-IgA to bands 81-93, 66, 48-54 and 29-38 kDa, in the first year after treatment.

The evaluation of laboratorial data showed a decrease statistically significant in the number of leukocytes, titers of isohaemagglutinins anti-A and absolute number of eosinophils, in patients with visceral toxocariasis, one year after treatment. In patients with ocular manifestation, the number of leukocytes and eosinophils were normal. At the beginning of the study, hypergammaglobulinemia was observed as well high levels of antibodies IgE and IgM. There was a correlation between the titers of specific IgE and the number of eosinophils, as well as correlation between total and specific IgG.

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