

ELEVATED IGG ANTIBODIES TO *Ascaris lumbricoides* IN RHEUMATOID ARTHRITIS PATIENTS: EXPOSURE OR SUSCEPTIBILITY?


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Rheumatoid arthritis (RA) is a chronic autoimmune disease affecting the joints, leading to inflammation and pain. The use of immunosuppressive therapy in RA patients increases their susceptibility to infections. *Ascaris lumbricoides* is one of the most prevalent helminths in humans, known for its immunomodulatory immune responses on the host. However, their impact on autoimmune diseases patients remains unclear. This study evaluated IgG reactivity against *A. lumbricoides* in RA patients and its potential association with disability. Serum samples from 89 RA patients receiving treatment at the Hospital de Clínicas da Universidade Federal de Uberlândia (HC-UFU) were collected (RA group), only six patients submitted fecal samples for parasitological exams, all of them had negative results. The control group (CT group) consisted of individuals residing in the same geographical area, sex, age, and income, with no chronic diseases. IgG antibodies against *A. lumbricoides* were detected using an enzyme-linked immunosorbent assay (ELISA) with plates coated with a synthetic peptide predicted as B-cell epitope to this helminth. A significantly higher IgG reactivity index (RI) was observed in the RA group compared to the control group ($p < 0.0001$). This could indicate an increased susceptibility to infection to *A. lumbricoides* in RA patients due to immune dysregulation or immunosuppressive therapy. However, no significant difference was found in HAQ-DI disability scores between seroreactive and non-seroreactive individuals. Demographic factors such as age, gender, and residence area did not significantly influence seropositivity. These findings suggest that RA patients exhibit higher IgG seroreactivity to *A. lumbricoides*, but this exposure does not appear to impact disease-related disability. Further studies are needed to determine if the exposure to *A. lumbricoides* in RA patients has meaningful immunomodulation on these patients.

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