IMMUNOREGULATION IN HUMAN AMERICAN LEISHMANIASIS: BALANCING PATHOLOGY AND PROTECTION

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ABSTRACT

Summary Leishmaniasis covers a broad spectrum of diseases with distinct, and sometimes overlapping, characteristics. The common thread in all forms of leishmaniasis is the infection by the parasite Leishmania belonging to the genus Leishmania. Upon infection of humans there can be at least three outcomes, 1) control of Leishmania by the host immune response resulting in asymptomatic disease, 2) patent infection and development of a relatively mild form of leishmaniasis, and 3) patent infection and development of severe clinical forms. The factors that determine the outcome of an initial inoculation with Leishmania are many, with the species of Leishmania representing one of the strongest predictive factors for the development of a given clinical form of disease. This is seen with L. braziliensis and L. amazonensis, infection leading mostly to tegumentary forms of disease, and L. infantum with the potential to induce visceral disease. However, it is also clear that the host immune response is a key factor in disease progression, not only responsible for control of Leishmania, but also playing an important role in disease progression and pathology. This duality between protective and pathogenic immune responses in individuals infected with Leishmania in the Americas is the focus of this review.