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VISCERAL LEISHMANIASIS IN CHILDREN FROM MATO GROSSO DO SUL STATE, BRAZIL: A CONTRIBUTION TO DIAGNOSIS AND TREATMENT

Thesis: Y. M. Brustoloni submitted this dissertation for her Masters in Health Sciences at the Central West Post-Graduation Program, UNB/UFG/UFMS, Campo Grande, Mato Grosso do Sul State, Brazil, 2006.

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ABSTRACT: Children are particularly affected by visceral leishmaniasis, which has steadily spread in Mato Grosso do Sul State and other areas of Brazil. Diagnosis and treatment of the disease in childhood were retrospectively investigated by analyzing data of patients admitted to the School Hospital of the Federal University of Mato Grosso do Sul from January 1998 to February 2005. The investigation included five studies and the clinical manifestation of the disease was verified. Visceral leishmaniasis has shown fast evolution in the region and manifested differently from the pattern considered typical for the infection (usually those of long-lasting course). Diagnosis of patients in a relatively early stage of the disease as well as available suitable treatment has resulted in low mortality. The methods conventionally employed for the diagnosis of visceral leishmaniasis were also analyzed. The combination of two traditional tests – direct microscopy of bone marrow aspirates (BMAs) and immunoflorescence serology – allowed diagnosis in 98.5% cases. Serological tests must be carried out, although most local health professionals have considered it of secondary importance favoring the use of myelograms. The use of polymerase chain reaction (PCR) for the detection of *Leishmania* DNA in archived Giemsa-stained BMA slides was evaluated. For the first time in Mato Grosso do Sul a molecular biology method was employed to study visceral leishmaniasis cases. PCR was useful to clarify diagnosis of difficult cases, due to its high sensitivity (92.3%) and specificity (97.7%). The most important aspects related to the disease treatment were evaluated along with the drugs prescribed and their adverse effects, therapeutic response, treatment length as well as difficulties of treatment management. Meglumine antimoniate was effective and safe for pediatric patients and, despite the current availability of new treatment options, its indication as first-line therapy for visceral leishmaniasis during childhood is still the most suitable in our setting. Post-treatment relapse was also noticed in one of the studies; four cases of relapse in children were described and the recently addressed aspects were discussed.

KEY WORDS: visceral leishmaniasis, kala-azar, children, diagnosis, PCR.

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