RESUMO SIMPLES - PROTOZOÁRIOS E AGENTES TRANSMITIDOS POR VETORES DE IMPORTÂNCIA EM SAÚDE

EFEITO DOS EXTRATOS DE PSYCHOTRIA IPECACUANHA NO TRATAMENTO DA LEISHMANIOSE VISCERAL

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Leishmaniasis is listed as a neglected tropical disease by the World Health Organization (WHO) because it affects socially vulnerable populations and has limited resources for treatment research. Recent data indicate that leishmaniasis occurs in 98 countries across 5 continents, with Brazil being endemic for all clinical forms. In our country, visceral leishmaniasis, the most severe form of the disease affecting the bone marrow, liver, and spleen, is caused by the species Leishmania infantum. The concept of One Health, which encompasses the interconnection between human, animal, and environmental health, is closely related to this study. Visceral leishmaniasis is a zoonosis in which dogs play a fundamental role as reservoirs of the parasite Leishmania infantum, being essential for the continuity of the transmission cycle to humans. Therefore, the implementation of effective strategies for the control of leishmaniasis in dogs directly impacts public health and contributes to the reduction of cases in humans. Furthermore, global warming, rampant

deforestation, and disordered urbanization contribute to the spread of the disease. Routine treatment against this pathology presents a series of limitations such as high costs, severe side effects, and the selection of resistant parasite strains. The neglect of leishmaniasis in endemic countries by the private sector, and especially by the pharmaceutical industry, is notorious. Natural products constitute an important and potential source of compounds useful for the treatment and control of different infectious diseases. The immense biodiversity of plants is still little explored scientifically and rationally as a source of products that could lead to the discovery of new pharmacological activities. The species Psychotria ipecacuanha, the focus of this work, is considered a subshrub belonging to the Rubiaceae family. Its roots contain two important alkaloids with high pharmacological relevance: emetine and cephaline, used in antidiarrheal, amebicidal, expectorant, and anti-inflammatory treatments. Ipecac roots contain a variety of substances, including starch, reducing sugars, resins, tannin, malic acid, citric acid, ipecacuanhic acid, in addition to the alkaloids that justify the plant's therapeutic properties, corresponding to 2% to 3% of the root dry weight. Initial in vitro experiments confirmed the effect of methanolic extracts from the roots of the species Psychotria ipecacuanha, native to Brazil and in high demand for export in industrialized areas, against Leishmania infantum parasites, potentially representing a tool in the fight against a neglected disease of great national scope. The methodology combines chemical characterization and in vitro biological screening. Psychotria ipecacuanha roots are processed and extracted by ultrasound in methanol, with alkaloids confirmed by TLC + Dragendorff. The extract profile is monitored by HPLC-UV, and its effects are evaluated on Leishmania infantum promastigotes and murine macrophages of the RAW 264.7 cell line, by mitochondrial viability assay (XTT) and optical microscopy to quantify amastigotes. Data will be statistically analyzed using GraphPad Prism. Considering all the information available in the literature on this family and species, the objective of this study is to analyze the impact of Psychotria ipecacuanha extracts against L. infantum and host cells. This analysis can serve as a valuable tool in addressing a neglected disease that widely affects the country, with the potential to expand more accessible, selective, and sustainable therapeutic options.

Palavras-chave: keywords: zoonoses; natural products; visceral leishmaniasis; chemotherapy.