v. 4, n. 41, 2024

International Journal of Health Science

TREATMENT OF LEISHMANIASIS WITH LIPOSOMAL AMPHOTERICIN B: AN INTEGRATIVE REVIEW OF THE LITERATURE

Ana Paula Bayerl Ramiro
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/2240645985379248

Áurea Barcelos Sperandio
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/5041901654772904

Carolina Almeida da Fonseca
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/0946575531558748

Eduarda Endlich de Freitas
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/0250120617173331

Gabriela Fonseca Nascimento
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/7135263489057468

João Pedro Frizzeira Lopes
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória - Espírito Santo
http://lattes.cnpq.br/8944098925327198

Lara Soares Lessa
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – ES
http://lattes.cnpq.br/3891489697038827

Lívia Spinassé Walfré
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/5212964076785378

Luiza Parpaiola Laeber
Student of the graduation course of medicine
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/6939558687777661

Adelson Luiz Ferreira
Professor of the Medicine Course
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/7755501604329037

Rodrigo Moraes
Professor of the Medicine Course
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória - Espírito Santo
http://lattes.cnpq.br/0598172220327707

Priscila Pinto e Silva dos Santos
Professor of the Medicine Course
Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória – EMESCAM
Vitória – Espírito Santo
http://lattes.cnpq.br/3547286701735695

Keywords: Visceral leishmaniasis. Treatment. Amphotericin B. Liposomes. Long-circulation liposomes.

INTRODUCTION

Leishmaniasis are infectious-parasitic diseases, caused by parasites of the genus Leishmania and transmitted by hematophagous insects of the genus: *Lutzomyia*. The forms of the disease found are American Tegumentary Leishmaniasis (ATL) and Visceral Leishmaniasis (VL). ATL has a variable clinical presentation, including multiple or single skin ulcers, diffuse cutaneous leishmaniasis and mucosal lesions. VL can occur asymptomatically or present with classic symptoms such as fever, hepatosplenomegaly, weight loss, cough, diarrhea, pain and abdominal distension. It is estimated that around 300,000 new cases result in 30,000 deaths/year worldwide. Drug treatment is the main current control measure, but has limitations due to toxicity and high cost. Liposomal amphotericin B stands out with its innovative performance.

OBJECTIVE

To evaluate the advantages of treating Leishmaniasis with liposomal amphotericin B and its therapeutic regimen.

METHOD

Literature review, with consultation of the UpToDate database using the descriptors Leishmaniasis and Amphotericin B, according to the Health Science Descriptors (DeCS/MeSH) the following search terms were used: Visceral Leishmaniasis, Treatment, Amphotericin B., Liposomes and Liposomes of prolonged circulation.

RESULTS

Liposomal amphotericin B consists of incorporating the drug into liposomes that are phagocytosed by macrophages in which the parasite is concentrated. The formulation improved stability in blood, macrophages and tissues, allowing sustained drug levels in tissue penetration. The presence of cholesterol mimics its action on mammalian membranes, providing greater specificity without causing adverse effects such as nephrotoxicity, hypokalemia, anemia, peripheral venous phlebitis and fever with chills related to the infusion, guaranteeing a great therapeutic advantage. In the cutaneous form, management is based on severity, in uncomplicated or complicated infections. The objective is clinical cure, since most infections resolve without treatment and not all treated patients eliminate the parasite. The mucous form is difficult to obtain a cure; therefore, the aim is to reduce morbidity and mortality. There are few randomized clinical trials, however it was observed that the toxicity of liposomal amphotericin B is lower than that of amphotericin deoxycholate, although data are limited in relation to the ideal dose and duration of therapy, in addition to cost limitations. In the visceral form, treatment is essential and consists of liposomal amphotericin B as it is more effective and safer. The most commonly used therapeutic regimen consists of the following doses according to specific situations.

CUTANEOUS

Without HIV: IV, 3 mg/kg/day on days 1 to 5 and then on the 10th or days 1 to 7. The total dose must be 18 to 21 mg/kg.

With HIV: IV, 2 to 4 mg/kg/day for 10 days or interrupted schedule. The total dose administered must be 20 to 60 mg/kg.

MUCOSAL INVOLVEMENT

Without HIV: IV, ~3 mg/kg/day for total cumulative dose of ~20 to 60 mg/kg.

With HIV: IV: 2 to 4 mg/kg/day for 10 days or interrupted schedule (for example, 4 mg/kg on days 1 to 5. Total dose: 20 to 60 mg/kg.

VISCERAL

Immunocompetent: IV, 3 mg/kg/day on days 1 to 5 and 3 mg/kg/day on days 14 and 21; a repeated course may be administered to patients who have not achieved parasite clearance (manufacturer's labeling). I

mmunocompromised, including HIV: Monotherapy: IV, 2 to 4 mg/kg/day or interrupted schedule (for example, 4 mg/kg on days 1 to 5, then alternate days). Total dose: 20 to 60 mg/kg.

CONCLUSION

The treatment of Leishmaniasis with liposomal amphotericin B allows the presence of the drug in the blood at sustained levels, being effective in most cases and without presenting major adverse effects. Furthermore, its therapeutic regimen is specific according to the form of manifestation of the disease.