DESENSITISATION PROTOCOL FOR LIPOSOMAL AMPHOTHERICIN B: A CASE REPORT

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Background and importance Liposomal amphotericin B (ANBL) is an effective and safe treatment, however non-IgE-mediated hypersensitivity reactions have been described.

Aim and objectives To describe the ANBL desensitisation protocol in a patient with leishmaniasis who developed a demonstrated hypersensitivity reaction to the drug.

Material and methods A 16-year-old male, 85 kg, with severe corticoid-dependent eosinophilic asthma, was admitted for prolonged fever, cholestatic hepatitis, splenomegaly and thrombocytopenia. Visceral leishmaniasis was diagnosed and ANBL treatment was started at 3 mg/kg intravenously (IV) to be administered over 2 hours.

During the perfusion the patient presented back pain and headache, which subsided when the perfusion was interrupted. Later, the perfusion was restarted at a slower rate; however, he developed erythematous plaques, discomfort, tachycardia and fever, as a result of which the perfusion was stopped.

The ANBL prick test was negative. It has been described that in non-IgE reactions there is a release of cytokines that trigger the symptoms of fever, hypotension, etc. Desensitisation to the antigen produced by the initial cytokine cascade is possible.

Second-line alternatives for leishmaniasis were not considered adequate, so it was decided to restart ANBL with a desensitisation protocol, which consisted of administering the drug in three steps, progressively increasing the infusion rate and concentration until administration of the full dose was reached. Low initial doses of antigen produce progressive depletion of activating signals and inhibition of mediator release, thus reducing clinical reactivity.

Results In our case, desensitisation consisted of only two steps: 1/10 dilution at a concentration of 0.2 mg/mL (25 mg/125 mL) and the full dose at 1 mg/mL (250 mg/250 mL) of ANBL in 5% glucose serum because there are no stability data for a more dilute preparation of ANBL (1/100).

The first dilution was administered in five perfusion rhythms starting at 2.5 mL/hour in 15 min, given good tolerance, the speed was progressively increased every 15 min: 5 mL/hour, 10 mL/hour, 20 mL/hour up to 40 mL/hour. Subsequently, the full dose of ANBL was administered in four rhythms, starting at 10 mL/hour, and increasing to 20 mL/hour, 40 mL/hour to 60 mL/hour, which was maintained until the full dose was reached. Premedication with paracetamol plus IV dexchlorpheniramine was necessary.

Conclusion and relevance The use of an ANBL desensitisation protocol has proven to be a safe option, which has allowed the administration of treatment without the appearance of adverse effects.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of interest No conflict of interest