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INTRAVITREAL PREPARATION OF LIPOSOMAL B AMPHOTERICIN: FROM FORMULATION STUDY TO PREPARATION

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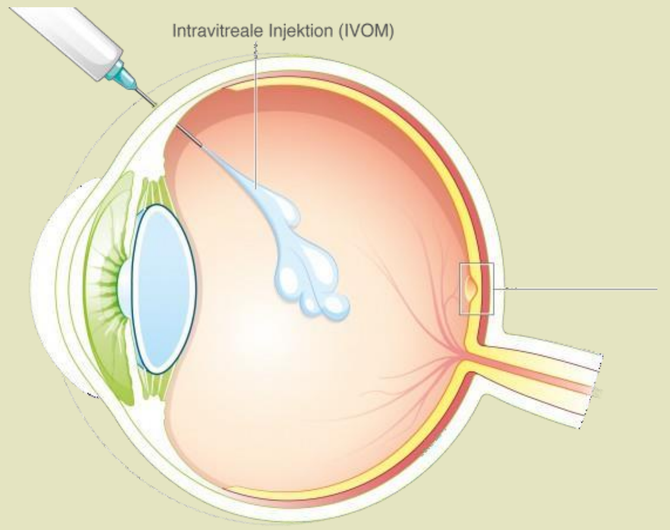
BACKGROUND AND AIM

Fungal vitreit is a vitreous body infection that falls within the broader field of endophthalmitis. The therapy for this pathology is the intravitreal injection of antifungal drugs that can be accompanied by topical or intravenous administration of the same antifungal drug. The pharmacy had to respond to a request for intravitreal preparation of liposomal b amphotericin 0.01mg/0.1ml. The rational use of the liposomal formulation has been the elective toxicity in the eye compared to the non-liposomal formulation of which are reported in the literature possible adverse events. The purpose of this paper is to describe the process which led to the formulation and compounding of the intravitreal preparation.



MATERIALS AND METHODS

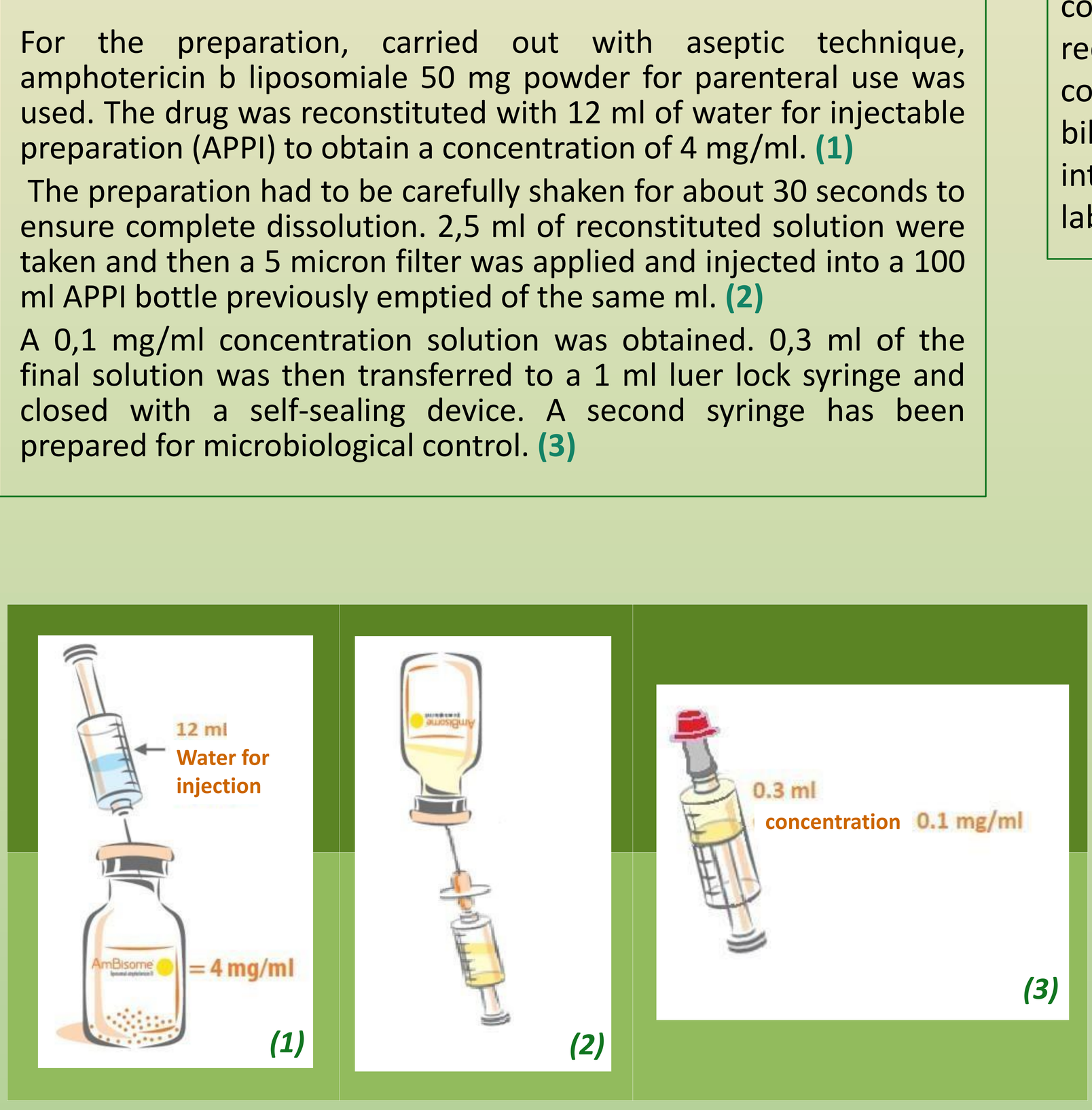
The existing scientific literature has been analysed in order to identify the correct procedure for setting up the required galenic preparation. The compounding has been studied from bibliographical data and discussed internally by our team of pharmacists, laboratory technicians and nurses.

RESULTS

For the preparation, carried out with aseptic technique, amphotericin b liposomiale 50 mg powder for parenteral use was used. The drug was reconstituted with 12 ml of water for injectable preparation (APPI) to obtain a concentration of 4 mg/ml. **(1)**

The preparation had to be carefully shaken for about 30 seconds to ensure complete dissolution. 2,5 ml of reconstituted solution were taken and then a 5 micron filter was applied and injected into a 100 ml APPI bottle previously emptied of the same ml. **(2)**

A 0,1 mg/ml concentration solution was obtained. 0,3 ml of the final solution was then transferred to a 1 ml luer lock syringe and closed with a self-sealing device. A second syringe has been prepared for microbiological control. **(3)**



CONCLUSION AND RELEVANCE

Clinical galenics has been instrumental in ensuring therapeutic opportunities not available with commercially available medicines for the personalized treatment of a patient with fungal vitreit associated with chorioretinitis. The pharmacist is essential for the particular knowledge of the drug in the field of formulation of galenic prescriptions magistral and laboratory technicians and nurses for the implementation of the same.

REFERENCES

Koç A, Onal S, Yenice O, Kazokoglu H. Pars plana vitrectomy and intravitreal liposomal amphotericin B in the treatment of Candida endophthalmitis. Ophthalmic Surg Lasers Imaging. 2010 Mar;1–3.

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