

Addition of amphotericin B to optisol-GS needs further study

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(HealthDay)—Further investigation of the addition of amphotericin B to

Optisol-GS, the most commonly used corneal storage medium in the United States, is warranted, according to research published online Feb. 25 in *JAMA Ophthalmology*.

Katherine Duncan, M.D., of the University of Maryland School of Medicine in Baltimore, and colleagues conducted an in vitro laboratory efficacy study to identify the lowest concentration of amphotericin B that could be used as supplementation in Optisol-GS to eliminate fungal contaminants. *Candida albicans* was used to inoculate the vials of Optisol-GS for the efficacy study. In a separate study, the potential toxic effects of amphotericin B to the corneas, with and without light exposure, were assessed.

The researchers found that concentrations of 0.06 and 0.12 µg/mL of amphotericin B added to Optisol-GS eliminated all fungal contaminants by day seven; [fungal growth](#) on day two was reduced by a mean of 3.5 colony-forming units. A concentration of 0.255-µg/mL of amphotericin B added to Optisol-GS eliminated all fungal contaminants by day two. In the safety study, no [toxic effects](#) were observed for corneas stored in Optisol-GS supplemented with amphotericin B, at any concentration, compared with paired controls. No difference was observed in the efficacy or safety of the light-exposed versus light-protected amphotericin B-supplemented Optisol-GS.

"These results do not prove that amphotericin B should be added to Optisol-GS; larger-scale studies and cost-benefit analyses need to be completed," the authors write. "Given the increasing incidence of postkeratoplasty fungal infection, however, the addition of amphotericin B to Optisol-GS deserves further investigation."

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