

**VETERINARY VOICE:
Tips of the Trade**

**Internal Medicine - Valley Fever Treatment Recommendations
Part 2: Amphotericin B**

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| <p>What is amphotericin B?</p> | <p>Amphotericin B is a polyene macrolide antifungal agent that this is fungicidal at higher doses. It acts by binding to sterols (primarily ergosterol) in the cell membrane and alters the permeability of the membrane allowing intracellular potassium and other cellular constituents to "leak out." It has been reported that amphotericin B has immunoadjuvant properties but further work is necessary to confirm the clinical significance of this effect.</p> |
| <p>What are some side effects of treatment with amphotericin B?</p> | <p>Amphotericin B is notorious for its nephrotoxic effects. The proposed mechanism of nephrotoxicity is via renal vasoconstriction with a subsequent reduction in glomerular filtration rate. Usually, renal function will return to normal after treatment is halted.</p> <p>Newer forms of lipid-complexed and liposome-encapsulated amphotericin B show promise for significantly reducing the nephrotoxic qualities of the drug. A study in dogs showed that amphotericin B lipid complex was 8-10 times less nephrotoxic than the conventional form.</p> |
| <p>What are the dosing recommendations?</p> | <p>Dose: 2 mg/kg IV diluted in D5W and administered over 2 hours. We typically treat 3 times per week for 5 weeks for a maximum total dose of 30 mg/kg.</p> |
| <p>What are some monitoring recommendations while using amphotericin B?</p> | <p>Renal function monitoring essential prior to each treatment</p> <p>Usually given in addition to azole therapy (fluconazole)</p> <p>May be cost prohibitive</p> |
| <p>Questions?</p> <p>Internal Medicine Experts: Robert Vasilopoulos, DVM, MS, DACVIM Michael Matz, DVM, DACVIM</p> | <p>The Veterinary Specialty Center of Tucson has board-certified internists available for questions and consultations on internal medicine conditions during the weekdays. A member of the internal medicine team is on-call 24/7 to provide consultations to VSCT emergency doctors and to perform emergency procedures (endoscopy, ultrasound) for patients seen by the VSCT emergency service. Board-certified internists have four additional years of training and are certified by the American College of Veterinary Internal Medicine (internal medicine) to assure competency in advanced veterinary internal medicine.</p> |