INDICATIONS AND USAGE

Micafungin for Injection is an echinocandin indicated in adult and pediatric patients for (1):

1. Treatment of candidemia, acute disseminated candidiasis, and other invasive candidal infections in patients who are intolerant or have failed treatment with another echinocandin, another antifungal agent, or have not been shown to precipitate when mixed directly with a 5% Dextrose Injection, USP reconstituted vial(s).

2. Treatment of invasive aspergillosis in patients who are intolerant or have failed treatment with another antifungal agent.

3. Treatment of Candida parapsilosis peritonitis and abscesses* in stem cell transplant recipients when other antifungal therapy is contraindicated, not tolerated, or considered inadequate.

**See above 286 (75) for Injection**/Issued: January 2020

Postmarketing Experience

Adverse reactions seen in 5% or more of adult patients and more than 1 adverse reaction:

- Headache
- Nausea
- Vomiting
- Diarrhea
- Urticaria
- Rash
- Hypersensitivity reactions

Adverse reactions occurring in 15% or more of adult patients and more than 1 adverse reaction:

- Headache
- Nausea
- Vomiting
- Diarrhea
- Urticaria
- Rash
- Hypersensitivity reactions

Adverse reactions occurring in 1 to 14% of adult patients:

- Diarrhea
- Urticaria
- Rash
- Hypersensitivity reactions

Adverse reactions occurring in less than 1% of adult patients:

- Anaphylactoid reactions (including shock)
- Hypersensitivity reactions
- Dyspnea
- Myalgia
- Arthralgia
- Spinal instability
- Back pain

Drug Interactions

CYP2C19 Is a Major Metabolizer of Micafungin

Micafungin: Inhibits CYP2C19, CYP3A4, and CYP2C9, and is an inducer of CYP2B6 and CYP3A4.

Ita/Fluconazole and Micafungin: In a clinical trial for the treatment of candidemia and other candidal infections in adult patients with neutropenia: Treatment with ita resulted in a higher incidence of adverse events than treatment with fluconazole. In this trial, the incidence of adverse reactions in patients treated with ita 50 mg/day dose was 2.8% and in patients treated with fluconazole 50 mg/day dose was 0.4% for micafungin-treated patients and 0.5% for fluconazole-treated patients. Patients treated with ita 50 mg/day dose had a significantly higher incidence of neutropenia (13.7% vs 2.8%) and thrombocytopenia (13.7% vs 4.6%) than patients treated with fluconazole 50 mg/day dose.

Other echinocandins: In a clinical trial for the treatment of fungal infections in adult patients: Patients treated with each echinocandin had a significantly higher incidence of adverse reactions than patients treated with fluconazole 50 mg/day dose. In this trial, the incidence of adverse reactions in patients treated with anidulafungin 15 mg/day dose was 4.0% and in patients treated with caspofungin 70 mg loading dose and 50 mg/day dose was 5.0%.

Cimetidine: Relevant interactions have not been identified.

Macrolides: Relevant interactions have not been identified.

Amphotericin B: Administration of micafungin with amphotericin B (0.4 mg/kg/day administered via central catheter) which was 13% of the planned dose, in a study of 13 patients with Candida albicans fungemia, resulted in a decrease in mean fungal burden in central venous catheters from 0.187 to 0.004. This decrease in fungal burden was also observed in the presence of steady-state micafungin levels. In this study, no patients had a decrease in fungal burden in the subcutaneous tissue.

Intravenous immunoglobulin: Relevant interactions have not been identified.

Other Echinocandins: Relevant interactions have not been identified.

Adverse Reactions in Adult Patients

The exposed and disposition of a 50 mg micafungin dose administered as a single 1-hour intravenous infusion in 10 healthy subjects aged 20 to 24 years. No dose adjustment is necessary for the elderly. In clinical trials, the mean (mean, median) micafungin area under the curve (AUC) was 593 (487, 664) ng·h/mL in pediatric patients.

Pediatric Patients Younger Than 4 Months of Age

Micafungin for Injection has not been shown to be effective in treating candidemia or invasive candidal infections in pediatric patients younger than 4 months of age.

Stem Cell Transplant Recipients

Micafungin for Injection has not been established in pediatric patients younger than 4 months of age.

Pediatric Patients with Candidemia and Other Invasive Fungal Infections in Hematopoietic Stem Cell Transplant Recipients

CYP2C19 is a major metabolizer of micafungin and CYP2C9 is a minor metabolizer of micafungin. Micafungin exposure in pediatric patients is expected to be lower than in adult patients due to lower hepatic clearance of micafungin in pediatric patients. Administration of micafungin to pediatric patients younger than 4 months of age is not recommended.

Pediatric Patients with Candidemia and Other Invasive Fungal Infections in Solid Organ Transplant Recipients

Micafungin for Injection has not been established in pediatric patients younger than 4 months of age.

Pediatric Patients Younger Than 4 Months of Age

Micafungin for Injection has not been shown to be effective in treating candidemia or invasive candidal infections in pediatric patients younger than 4 months of age.

Safety Data from Clinical Trials

Adverse Reactions in Pediatric Patients

The safety and effectiveness of micafungin for injection in pediatric patients have not been established. In pediatric patients, the adverse reactions reported in 5% or more of the patients and more than 1 adverse reaction were:

- Nausea
- Diarrhea
- Urticaria
- Rash
- Hypersensitivity reactions

Adverse reactions occurring in 1 to 4% of pediatric patients were:

- Headache
- Vomiting
- Nausea
- Diarrhea
- Urticaria
- Rash
- Hypersensitivity reactions

Adverse reactions occurring in less than 1% of pediatric patients were:

- Anaphylactoid reactions
- Edema
- Pharyngitis
- Rhinitis
- Sinusitis
- Candida esophagitis
- Acne
- Dysgeusia
- Hemolytic anemia
- Hypersensitivity reactions

Drug Interactions

Micafungin is a competitive inhibitor of CYP2C19. Relevant interactions have not been identified.

Macrolides: Relevant interactions have not been identified.

Amphotericin B: Administration of micafungin with amphotericin B resulted in a decrease in mean fungal burden in central venous catheters from 0.187 to 0.004. This decrease in fungal burden was also observed in the presence of steady-state micafungin levels. In this study, no patients had a decrease in fungal burden in the subcutaneous tissue.

Intravenous immunoglobulin: Relevant interactions have not been identified.

Other Echinocandins: Relevant interactions have not been identified.

Adverse Reactions in Pediatric Patients

The exposed and disposition of a 50 mg micafungin dose administered as a single 1-hour intravenous infusion in 10 healthy subjects aged 20 to 24 years. No dose adjustment is necessary for the elderly. In clinical trials, the mean (mean, median) micafungin area under the curve (AUC) was 593 (487, 664) ng·h/mL in pediatric patients.

720 x 260 mm