MICONAZOL NITRATO
Antimicótico de amplo espectro

http://aformulabr.com.br/qrcode/miconazolnitrafv01.pdf
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Antimicótico de amplo espectro

DESCRIÇÃO
Antimicótico de amplo espectro ativo, seja por via sistêmica ou por via tópica, contra dermatófitos, saprófitas e leveduras, atuando sobre bactérias como estreptococos e estafilococos, por exemplo.

MECANISMO DE AÇÃO
O Miconazol nitrato inibe a biossíntese do ergosterol no fungo e altera a composição de outros componentes lipídicos da membrana, aumentando a permeabilidade da saída de nutrientes, ocasionando necrose da célula fúngica. Age rapidamente nas infecções por dermatófitos (micoises superficiais) comuns como Trichophyton rubrum, T. mentagrophytes, Epidermophyton floccosum, Candida albicans e Pityrosporum orbiculare, leveduras e outros fungos, não produzindo níveis sanguíneos detectáveis, concluindo que sua ação é exclusivamente local quando aplicado de forma tópica.

INDICAÇÕES
✓ Otites micóticas;
✓ Candidíase oral e vaginal;
✓ Micoises superficiais por leveduras, dermatófitos e saprófitas;
✓ Infecções micóticas dos olhos e anexos oculares; ceratite por Acanthamoeba.

DOSE USUAL
Recomendação de uso tópico de 2% de Miconazol nitrato ao dia.

SUGESTÕES DE FÓRMULAS

<table>
<thead>
<tr>
<th>Miconazol Nitrato</th>
<th>Gel orabase qsp</th>
<th>2%</th>
<th>10g</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modo de uso:</strong></td>
<td>aplicar nas lesões 3 a 4 vezes ao dia.</td>
<td><strong>Indicação:</strong> candidíase oral.</td>
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<tr>
<th>Miconazol Nitrato</th>
<th>Tablete mucoadesivo qsp</th>
<th>50mg</th>
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<tr>
<td><strong>Modo de uso:</strong></td>
<td>aplicar 1 tablete na gengiva superior, 1 vez ao dia pela manhã.</td>
<td><strong>Indicação:</strong> mucosite em pacientes em tratamento quimioterápico.</td>
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<tr>
<th>Miconazol Nitrato</th>
<th>Gotas qsp</th>
<th>2%</th>
<th>10mL</th>
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<tbody>
<tr>
<td><strong>Modo de uso:</strong></td>
<td>2 a 3 gotas no conduto auditivo, 2 a 3 vezes por dia.</td>
<td><strong>Indicação:</strong> otite externa micótica.</td>
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<tr>
<td><strong>Obs:</strong> continuar por 14 dias após o desaparecimento da infecção.</td>
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PRINCIPAIS REFERÊNCIAS

Miconazole activity against Candida biofilms developed on acrylic discs.

Oral candidiasis in the form of Candida-associated denture stomatitis (CaDS) is associated with Candida adhesion and biofilm formation on the fitting surface of poly (methyl methacrylate) (PMMA) dentures. Candida biofilms show considerable resistance to most conventional antifungal agents, a phenomenon that is considered a developmental-phase-specific event that may help explain the high recurrence rates associated with CaDS. The aim of this study was to examine the activity of miconazole towards in vitro-grown mature Candida biofilms formed on heat-cured PMMA discs as a standardized model. The effect of miconazole nitrate on Candida biofilms developed on acrylic discs was determined for C. albicans MYA-2732 (ATCC), C. glabrata MYA-275 (ATCC), and clinical isolates, C. albicans 6122/06, C. glabrata 7531/06, C. tropicalis 8122/06, and C. parapsilosis 11375/07. Candida biofilms were developed on heat-cured poly(methyl methacrylate) discs and treated with miconazole (0.5 - 96 μg/ml). The metabolic activity of the biofilms was measured by the XTT reduction assay. The minimum inhibitory concentrations (MICs) of miconazole against Candida species were determined by the microdilution method. The MICs for miconazole for the investigated strains ranged from 0.016-32 μg/ml. Treatment with miconazole resulted in a significant reduction of biofilm metabolic activity for all strains. The highest inhibition was observed at 96 μg/ml miconazole. In the case of C. glabrata MYA-275 and C. tropicalis 8122/06 this corresponded to 83.7% and 75.4% inhibition, respectively. The lowest reduction was observed for C. parapsilosis 11375/07-46.1%. For all Candida strains there was a strong correlation between MIC values and miconazole concentrations corresponding to a reduction of metabolic activity of the biofilm by 50%. Miconazole exhibits high antifungal activity against Candida biofilms developed on the surface of PMMA discs. The study provides support for the use of miconazole as an effective agent for the treatment of CaDS.

Topical miconazole nitrate ointment in the treatment of diaper dermatitis complicated by candidiasis.

Diaper dermatitis (DD) complicated by candidiasis is a common problem in diaper-wearing infants and children. We report a double-blind, vehicle-controlled, parallel-group study evaluating the efficacy and safety of a low concentration of miconazole nitrate in a zinc oxide/petrolatum ointment for the treatment of DD complicated by candidiasis. Patients (N=330) who had DD with a severity score of 3 or higher were enrolled. Those patients with a baseline potassium hydroxide (KOH) preparation and a baseline culture specimen that both tested positive for Candida were retained for efficacy analysis (n=236). Miconazole nitrate 0.25% ointment or a zinc oxide/petrolatum vehicle control were applied or a zinc oxide/petrolatum vehicle control were applied to all clinically affected areas of patients with DD for 7 days at each diaper change and after bathing. A follow-up test-of-cure visit was conducted at day 14. Among the patients completing the study, the overall rate of cure (clinical cure plus microbiologic cure) was 23% for the miconazole nitrate group and 10% for the vehicle control group (P=.005); the rate of clinical cure (complete rash clearance, DD severity score=0 at day 14) was 38% for the miconazole nitrate group and 11% for the vehicle control group (P<.001); and the rate of microbiologic cure (no culture growth of Candida) was 50% for the miconazole nitrate group and 23% for the vehicle control group. The vehicle control resulted in mild improvement at day 3 but little or no subsequent improvement. The discontinuation rate due to clinical failure was substantially lower for the miconazole nitrate group (4%) than the vehicle control group (47%). The mean DD severity index score for the miconazole nitrate group was significantly lower from day 3 through day 14 compared with that of the vehicle control group (P<.001). Adverse events were assessed as either unlikely to be related to study medication or unrelated to study medication. By including only those patients with microbiologically confirmed Candida infection, the study population may not be fully indicative of patients treated for DD in routine clinical practice. Our data show that miconazole nitrate 0.25% ointment was well tolerated and significantly more effective than the zinc oxide/petrolatum vehicle control for treatment of DD complicated by candidiasis.
Repeated exposure of Candida spp. to miconazole demonstrates no development of resistance.

Oropharyngeal candidiasis (OPC) is a common infection among the immuno-compromised population. Treatments include both systemic azoles, most commonly fluconazole (FLU), and topical agents such as miconazole (MICON). However, resistance to FLU has been reported with a greater frequency. The aim of this study was to determine the potential for development of resistance following repeated exposure of Candida spp. to MICON. Two clinical isolates each of Candida albicans, C. glabrata, and C. tropicalis were tested. Fifteen passages of each strain were performed in concentrations of MICON at 0.5 minimum inhibitory concentration (MIC), 1 MIC, 2 MIC and 4 MIC, with MIC determinations performed on growth obtained following each passage. There was no increase in the MIC of four of the six strains following fifteen passages in MICON. One C. albicans strain demonstrated a four-five dilution increase in MICON MIC at all concentrations and one C. glabrata strain showed a fivefold MICON MIC increase when exposed to 4 MIC. Although an increase in MIC was noted in these two isolates, the MICON MIC was still very low (0.5 μg ml(-1)). In general, there was no increase in MIC demonstrated by repeated exposure to MICON in this study.

Antimycotic therapy in otomycosis with tympanic membrane perforation

Abstract: Especially after prolonged antibiotic ototopic therapy otomycosis is not rare. An inoculation of fungi into the tympanic cavity however may have serious sequelae. Therefore an eradication of fungi from the external auditory canal is imperative before surgery. In addition to thorough cleaning of the outer ear canal antimycotic preparations are recommended in treating otomycosis. However, all of the commercially available ear drops contain ototoxic agents. In the case of defects of the tympanic membrane a damage of the inner ear may result. Alternatively, we suggest an aqueous solution of Miconazol 0.5%.

Miconazole mucoadhesive buccal tablet in high-dose therapy with autologous stem cell transplantation (HDT/ASCT)-induced mucositis.

Abstract Oral mucositis is a major cause of morbidity in high-dose therapy/autologous stem cell transplantation (HDT/ASCT), where microbial colonization has an important pathological implication. In this study, we evaluated the impact of miconazole mucoadhesive buccal tablet (MBT) on mucositis-related complications. During two consecutive 34- month periods, patients treated with HDT/ASCT in our hematology department received either miconazole MBT (60 patients) or conventional oral amphotericin B suspensions three times a day (44 patients) in order to prevent or decrease chemotherapy-induced mucositis. The use of miconazole MBT is associated with less infectious complications as indicated by shorter antibiotic use (7.8 vs. 12.3 days; p<0.0001), shorter intravenous antifungal use (1.4 vs. 3.6 days; p=0.02), and a trend towards less yeast contamination in stool samples. Less patients required any analgesic drugs during hospitalization in the miconazole MBT group (18 vs. 7 %; p=0.09). Indirect indicators of chemotherapy-induced mucositis (duration of hospitalization, morphine use) were in favor of miconazole MBT in patients with multiple myeloma (MM) but not for those with lymphoma. This study suggests that miconazole MBT provides a valid alternative to oral amphotericin B suspensions in regards to mucositis-related complications. A prospective and randomized study is warranted to establish the definite role of miconazole MBT.

The joint in vitro action of polymyxin B and miconazole against pathogens associated with canine otitis externa from three European countries.

BACKGROUND: Canine otitis externa, an inflammation of the external ear canal, can be maintained and worsened by bacterial or fungal infections. For topical treatment, combinations of anti-inflammatory and antimicrobial ingredients are mainly used. HYPOTHESIS/OBJECTIVES: This study was conducted to elucidate the in vitro activity of polymyxin B and miconazole against clinical bacterial isolates from three European countries, to investigate possible differences
in sensitivity and to assess drug interactions. **ANIMALS:** Seventeen strains of Escherichia coli, 24 strains of Pseudomonas aeruginosa, 24 strains of Proteus mirabilis and 25 strains of Staphylococcus pseudintermedius from dogs with diagnosed otitis externa had been isolated in Germany, France and Italy. **METHODS:** Drug activities were evaluated by minimal inhibitory concentration (MIC) and minimal bactericidal concentration. The potentiation of polymyxin B plus miconazole was calculated using the fractional inhibitory concentration index (FICI). An FICI ≤0.5 defined synergy. Furthermore, geographical variations in the FICI and MIC were assessed by statistical analysis. **RESULTS:** Bacterial susceptibilities were comparable in different European countries, because there were no significant MIC and FICI variations (P > 0.05). As a single agent, polymyxin B had bactericidal activity against most E. coli and P. aeruginosa strains and, in higher concentrations, against S. pseudintermedius strains. Miconazole was bactericidal against all Staphylococcus strains. Synergy was demonstrated against strains of E. coli and P. aeruginosa (FICI = 0.25 and 0.50, respectively), whereas overall there was no interaction against S. pseudintermedius strains (FICI = 1.25). Proteus mirabilis strains were not inhibited by each of the drugs individually or by their combination. **CONCLUSIONS AND CLINICAL IMPORTANCE:** In vitro synergy of polymyxin B and miconazole against E. coli and P. aeruginosa isolates indicates a rationale for applying both agents in combination to treat otitis externa when infected with these types of bacteria.

**REFERÊNCIAS**


