Review

THE PHARMACOKINETIC PROPERTIES OF CURRENT SYSTEMIC ANTIFUNGAL AGENTS

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SUMMARY

Human fungal infections have increased dramatically and are difficult to treat. The spread of HIV/AIDS infection, the use of immunosuppressive drugs and broad-spectrum antibiotics have contributed to the spread of fungal infections. Spontaneous remissions are rare, and recurrence after treatment is common. The pharmacotherapy of the fungal diseases has been revolutionized by the introduction of the relatively non-toxic oral azoles. The systemic treatment with the new antifungal agents - fluconazole, itraconazole, and terbinafine - and the knowledge of their pharmacological and pharmacokinetic properties make possible the pulse therapy in the treatment of the fungal infections. This will be of great benefit for patients from pharmacological as well as pharmacoeconomic aspects.

KEY WORDS

dermatomycosis, onychomycosis, systemic treatment, azoles, ketoconazole, fluconazole, itraconazole, pulse therapy, terbinafine

INTRODUCTION

The incidence and severity of human fungal infections have dramatically increased in recent years, mainly due to advances in surgery, cancer treatment, and critical care accompanied by increases in the use of broad-spectrum antimicrobials and the HIV epidemic.

Pharmacotherapy of fungal diseases has been revolutionized by the introduction of the relatively non-toxical oral azole and allylamine drugs.

The antifungal drugs available belong to several categories: systemic drugs for systemic infections, oral and topical drugs for mucocutaneous infections.

The need for new antifungal agents with better therapeutic profiles arose from the requirement for intravenous and peroral systemic administration and the toxicity of the older antifungal agents. The relatively non-toxic oral azoles represented the first major advance in this direction. These medications have played an increasingly important role in the systemic therapy of fungal diseases, since they were introduced in 1980s.