

Activity of fluconazole and its Cu(II) complex towards *Candida* species.

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Candida species, although they are present as commensal organisms in the digestive tract of healthy individuals, can produce a broad spectrum of serious illnesses in compromised hosts. Fluconazole, a water-soluble triazole with bioavailability greater than 90 %, has been extensively used to treat a wide range of *Candida* infections. However, a growing resistance of microorganisms in the treatment leads to the discovery of new drugs or modifications of existing ones. The aim of the present study was to investigate whether coordination of Cu(II) ions to fluconazole affects its antifungal activity. The in vitro susceptibility tests and antifungal studies were performed with two *Candida* spp.: *Candida glabrata* and *Candida albicans*. Overall, 34 strains of the former and 16 strains of the latter were treated with fluconazole, its Cu(II) complex and free Cu(II) ions. The obtained MIC values in 16 cases of the *C. glabrata* and in 5 cases of the *C. albicans* were lower for the complex in comparison to the drug. This implies that the complex is more effective against particular strains than the parent drug. The most significant improvement in the complex drug efficacy was observed for fluconazole-resistant species.

Słowa kluczowe

Fluconazole–Cu(II) complex, *Candida* species, Azole resistance, MIC determination

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