A study was conducted to analyse the susceptibility to miconazole and ketoconazole in 43 isolates (one to three isolates per patient) of *C. albicans* with variable sensitivities to fluconazole from 23 autoimmune polyendocrinopathy-candidiasis-ectodermal dystrophy patients with known clinical and antifungal history [Finland]. A total of 16% of all isolates had decreased susceptibility to miconazole (minimum inhibitor concentration (MIC) 2 mg/litre). All these isolates had also decreased susceptibility to fluconazole. Of the 18 fluconazole dose-dependent isolates, 7 (39%) had decreased susceptibility to miconazole. All isolates were susceptible to ketoconazole. However, there was a significant positive correlation between miconazole and ketoconazole MICs (P<0.0001) as well as between miconazole and fluconazole (P=0.0044) and ketoconazole and fluconazole MICs (P=0.0010), suggesting a shared mechanism for reduced susceptibility. In addition, significant positive correlations were seen between miconazole and posaconazole (P=0.0014) and miconazole and voriconazole MICs (P=0.0041) as well as between ketoconazole and posaconazole (P=0.0005) and ketoconazole and voriconazole MICs (P=0.0008).