Objective: The aim of this study was to evaluate the virulence factors and antifungal susceptibilities of Candida strains, which were isolated from various clinical specimens. 

Methods: One-hundred Candida strains were identified. Bovine serum albumin agar was used to investigate proteinase production and egg yolk agar was used to test phospholipase production. Modified tube adherence method was used for investigation of slime activity. The antifungal susceptibilities of the strains for amphotericin B, fluconazole, voriconazole and caspofungin were evaluated by using reference broth microdilution method.

Results: Forty-eight percent (n=48) of the Candida strains were identified as C. albicans which represented the most common species. Both proteinase and phospholipase production rates were significantly higher among C. albicans isolates (79%; 66%) than non–albicans Candida strains (11.5%; 0%) (r=33.22, p<0.001 and r=206.8, p<0.001 respectively). On the other hand, slime activity was significantly higher among non-albicans strains (30%) when compared with C. albicans (0%) (r=0.228, p<0.001). MIC ranges were found as 0.03-1 μg/mL, 0.125 - ≥64 μg/L, 0.03-2 μg/mL and 0.015-2 μg/mL for amphotericin B, fluconazole, voriconazole and caspofungin respectively.

Conclusion: Proteinase and phospholipase activities can be suggested as important virulence factors in C. albicans infections, while the slime factor production seems to be more important in non-albicans Candida infections. In addition, amphotericin-B, voriconazole and caspofungin can be suggested to be effective on Candida strains and may be used as alternative drugs for treatment of infections caused by fluconazole-resistant strains.