

Pola kepekaan terhadap antifungal dan pengaruh desinfeksi terhadap profil fenotip dan genotip kontaminasi permukaan oleh *Candida* spp. di ruang perawatan intensif rumah sakit rujukan di Jakarta = Antifungal susceptibility pattern and the effect of disinfection towards phenotypic and genotypic profiles of surfaces contamination by *Candida* spp. in intensive care unit of a referral hospital in Jakarta

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Abstrak

Candida spp. merupakan patogen nosokomial yang paling umum diisolasi di antara spesies ragi dan menyebabkan mortalitas yang tinggi. Kontaminasi *Candida* yang resistan antifungal banyak ditemukan pada berbagai permukaan di lingkungan rumah sakit, sehingga meningkatkan kemungkinan transmisinya dari lingkungan. Penelitian ini bertujuan untuk mengetahui gambaran kontaminasi, efektivitas desinfeksi, serta karakteristik kepekaan *Candida* spp. terhadap antifungal. Penelitian dilakukan dengan pengambilan sampel permukaan di ruang perawatan intensif rumah sakit rujukan di Jakarta pada area high touch surfaces. Sampel dibiakkan pada medium CHROMagar *Candida*TM, kemudian koloni ragi dihitung untuk mengetahui pengaruh disinfektan. Identifikasi spesies dilakukan menggunakan VITEK, kemudian dilanjutkan dengan PCR dan sekuensing dengan target regio ITS, serta dilakukan analisis filogenetik. Profil kepekaan *Candida* spp. dianalisis menggunakan VITEK. Berdasarkan hasil dijumpai 7 spesies *Candida* yang mengontaminasi permukaan yang didominasi oleh *C. haemulonii*. Hasil uji kepekaan antifungal menunjukkan bahwa seluruh isolat *C. haemulonii* resistan terhadap amphotericin B, dan satu isolat *C. glabrata* resistan terhadap caspofungin. Berdasarkan analisis efektivitas disinfektan, terdapat penurunan jumlah koloni *Candida* spp. sesudah prosedur desinfeksi yang menunjukkan bahwa prosedur desinfeksi sudah cukup efektif. Sebagai kesimpulan, *C. haemulonii* merupakan kontaminan utama pada permukaan yang resistan amphotericin B. Adapun tindakan desinfeksi sudah efektif namun cara melakukan desinfeksi perlu diperbaiki.

.....*Candida* spp. is the most common nosocomial pathogen isolated among yeast species with a high mortality rate. Antifungal-resistant *Candida* contamination has been found on various surfaces in the hospital environment, thus increasing the possibility of transmission. This study was conducted to determine *Candida*'s contamination profile, disinfection efficacy, and antifungal susceptibility features. Surface samples were collected in the intensive care unit of referral hospital in Jakarta, at the high touch surfaces area. The samples were then cultured on CHROMagarTM *Candida*, then yeast colonies were counted to determine the disinfectant efficacy. Species were identified using VITEK, PCR and sequencing targeting the ITS region, followed by phylogenetic analysis. Susceptibility characteristic of *Candida* spp. were analyzed using VITEK. The surface was contaminated by seven species of *Candida*, with *C. haemulonii* predominating. All *C. haemulonii* isolates were resistant to amphotericin B, and one *C. glabrata* isolate was resistant to caspofungin. The disinfectant efficacy analysis showed that there was a decrease in the number of *Candida* spp. after disinfection treatment, indicating that the disinfectant is quite effective. In summary, *C. haemulonii* is the main contaminant on surfaces that are resistant to amphotericin B. Although the disinfection techniques have been effective, they still require improvement