Virulence Factors of Candida spp. from Patients Affected by Diabetes Mellitus

(IN VITRO)

ABSTRACT

Background: Candidiasis is one of the most common infections in people with diabetes, especially in uncontrolled diabetes mellitus. In addition to local and systemic factors that can affect the balance between the host and the fungus Candida, which supports change from commensal Candida become pathogenic microorganisms. Candida spp. have developed specific virulence mechanism which gives the ability to adherence on the host, the formation of hyphae, and biofilm formation.

Purpose: Proving the existence of the virulence factors of Candida spp. isolated from patients with DM that is determined by the strength adherence, hyphae formation and biofilm formation.

Method: The study design was observational analytic. There are 13 people who meet the criteria of the sample, 10 patients with DM and 3 non DM as a control to be sampled in the form of the cheek mucosa swab and blood sampling.

Results: There is a significant relationship between virulence factors of Candida spp. And patients with diabetes demonstrated with significant value of 0.252 (p>0.005). Virulence factors of Candida spp. higher in DM patients.

Conclusion: The level of adherence strength Candida spp. in patients with DM are strongest than non DM, the formation of biofilm of Candida spp. in DM patients had an average OD values were higher than non DM, and formation of hyphae of Candida spp. in patients with DM more than the non DM.

Keywords: Virulence factor, Candida spp, Diabetes mellitus