

ERG11 expression in azole resistant *Candida* species isolated from diabetic patients in a tertiary care centre

Candidiasis has emerged as an alarming opportunistic infection with an increase in a number of patients among the diabetics who have immune dysfunction. Over the last decade, *non-albicans Candida* associated with human infections have increased and in recent times have developed resistance to anti-fungal agents, in particular to the azole compounds. In this study conducted in Tirunelveli Medical College, Tirunelveli from June 2017- July 2018, 41.1% of diabetic females had Vulvovaginal candidiasis whereas only 13% of diabetic males had Candiduria. Among the isolates obtained from Vulvovaginal candidiasis 39.1% were *Candida albicans* and 61.9% were *non-albicans Candida* whereas among candiduria isolates, only 33.3% isolates were *Candida albicans* and the rest were *non-albicans Candida*. The antifungal susceptibility testing of isolates from Vulvovaginal candidiasis shows that 39.1% were sensitive, 34.8% were susceptible dose dependent and 17.4% were resistant to Fluconazole while most of the isolates were sensitive to Voriconazole and all the isolates were sensitive to Itraconazole. Candiduria isolates showed 66.7% susceptibility and 33.3% dose dependent susceptibility to Fluconazole and 100% susceptibility to Voriconazole and Itraconazole. Overall the *non-albicans Candida* isolates showed more resistance to azoles. Only one isolate was positive for PCR done to indirectly detect ERG11 overexpression among the four Fluconazole resistant isolates. The emergence of *non-albicans Candida* have clinical implication due to their reduced susceptibility to various antifungals, thus highlighting the importance of isolation, species identification and antifungal susceptibility of *Candida* prior to initiation of therapy. Further studies are required to explore the molecular mechanisms that could be targeted to control Fluconazole resistance.

Keywords: Vulvovaginal candidiasis, Candiduria, Diabetes Mellitus, Fluconazole resistance.