

Immunosuppression Level in HIV-Positive Patients with Oropharyngeal Candidiasis

Dear Editor,

Oropharyngeal candidiasis (OPC) is the most common opportunistic fungal infection in patients with HIV infection. Its incidence increases as the impairment of cellular immunity progresses.^[1] A total of 60 isolates of *Candida* spp. obtained from HIV-positive patients having OPC were processed and their CD4 count was determined to find out the correlation of various isolates of *Candida* spp. and their antifungal susceptibility to the CD4 count of the patients. HIV seropositivity was confirmed by three E/R/S tests as per guidelines of NACO, Government of India. Antifungal susceptibility testing of various isolates was

done for fluconazole, amphotericin B, and ketoconazole in accordance with standard procedures,^[2] and CD4 count was measured by fluorescent activated cell sorter (FACS) counter (Becton Dickinson, Cockyeville, MD, USA).

Out of 60 *Candida* spp. isolates obtained, 45 (75%) were *Candida albicans* and 13 (22.67%) were nonalbicans *Candida* spp. Among the nonalbicans species *C. tropicalis* was found to be the commonest. Other authors have also reported *C. albicans* to be the major isolate and *C. tropicalis* as the commonest nonalbicans species in HIV-positive patients having OPC.^[1,3] Of the 60 patients, 46 (76.66%) had CD4 count <200 cells/mm³ [Table 1]. Singh *et al*, also

Table: Distribution of various species of *Candida* and antifungal resistance of various isolates in relation to CD4 count of the patients

CD4 count (Cells/mm ³)	Isolates* (%)	<i>Candida</i> spp.		Fluconazole resistant isolates	
		Albicans** (%)	Nonalbicans*** (%)	Albicans (%)	Nonalbicans (%)
<50	13 (21.66)	7 (15.55)	6 (40)	2 (4.44)	4 (26.66)
50–200	33 (55)	24 (53.33)	9 (60)	-	1 (6.66)
200–500	13 (21.66)	13 (28.88)	-	-	-
>500	1 (1.66)	1 (2.22)	-	-	-

*N = 60; **n = 45; ***n = 15

reported that there is significantly increased risk of OPC in HIV-infected patients with progressive immunodeficiency (CD4 + <200 cells/mm³).^[4] Therefore, even when patient's CD4 cell count is not known, presence of oral lesions may be considered as an indirect marker of immunosuppression. In the current study, a close association was observed between prevalence of non albicans *Candida* spp. and fluconazole resistance with low CD4 count [Table], which goes well with the findings of other authors.^[4,5] The level of immunosuppression and prior fluconazole therapy, are important risk factors in the emergence of resistance in yeast isolates.

It is concluded that *C. albicans* is the major isolate causing OPC in HIV-seropositive patients and nonalbicans species are emerging as important pathogens with increased immunosuppression. Since OPC may be considered as indirect marker of immunosuppression in HIV-positive patients, regular oral checkup of these patients could be an indicator of the level of immunosuppression.

References

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