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Association of *Candida albicans* in development of oral cavity infection with reference to oral carcinoma in North Indian population

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Presently, cancer one of the most prevalent types of disease is a growing health problem around the world and is one of the leading causes of death. Oral cancer is the sixth most common cancer which occurs worldwide and continues to be the most prevalent cancer which develops in multistep process from pre-existing potentially malignant lesions. The most common precancer is leukoplakia which represents 85% of such lesions and 95% of oral cancers are squamous cell carcinomas (OSCC). In India, the incidence of oral submucous fibrosis (OSMF) and OSCC is also increasing like an epidemic and vast majority of OSCC arises from pre-existing leukoplakia. Several studies have reported that 1-18% of premalignant oral lesions will develop into malignant form. *C. albicans* has also been identified as a possible factor in development of oral leukoplakia and its malignant transformation. *Candida* species, dimorphic harmless eukaryotic organism are members of phylum Ascomycota. In healthy individuals, it mostly resides as a part of normal commensal microbial flora on mucosal surfaces of oral cavity. *C. albicans* grows as a filamentous form, capable of forming true hyphae and is one of the only *Candida* species. Hyphae play important roles in adhesion and invasion into epithelium. It contributes many virulence attributes like adherence to host tissue and release of some hydrolytic enzymes. It is still unclear, how an increased amount of *C. albicans* in oral cavity influence the progression of pre-cancer to malignancy. A higher level of *C. albicans* is present in precancerous and OSCC patients. *C. albicans* is most pathogenic and significantly more successful pathogen in oral malignancy transformation. There are no drugs which can effect extremely to treat oral cancers. There is a general call for new emerging drugs that are highly effective towards cancer, possess low toxicity, and have a minor environment impact. Novel natural products offer opportunities for innovation in drug discovery. Natural compounds isolated from medicinal plants, as rich sources of novel anticancer drugs, have been of increasing interest. The alarming reports of cancer cases increase the awareness amongst the clinicians and researchers pertaining to investigate newer drug with low toxicity.

Biography

Fahad Mansoor Samadi has completed his MDS from Sardar Patel Post graduate Institute. He is an Assistant Professor in Dept. of Oral Pathology and Microbiology, K G M U. He has published many papers in reputed journals and book chapters.

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