

FORMALIN ASSOCIATED CANDIDOSIS OF MAN

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Candida albicans is the most important unicellular fungal pathogen that causes human infections (Budtz-Joergensen, 1990). However, the clinical importance of *Candida* species other than *C. albicans* has also been demonstrated by many research workers (Samaranayake & Holmstrup, 1989). *Candida* species are widely distributed in nature and primarily live as saprophytes. Further, these species have been isolated from a number sources such as pickle brine and soft drinks (Weems, 1992). However, there are no reports on possible influence of formalin as a source of infection of human candidosis. Therefore, the aim of this study is to evaluate a possible role of formalin in causing chronic cutaneous infections in man.

The current study is based on the clinical reports of three young male laborers, who are working with cadavers of the Division of Anatomy of the Faculty of Dental Sciences, University of Peradeniya, Sri Lanka. Of the three laborers, two were found to have highly distorted finger nails and one person was found to have and infected inter-capitular region of one of the palms. Both microbiological and pathological investigations were carried out on these patients. Further, a number of specimens of cadavers containing room including the formalin of the cadavers containing tank were subjected for microbiological analysis.

The initial pathological investigations revealed the presence of typical candidal infections of these patients. These specimens were stained with diastase periodic acid schiff (DPAS) and presented with candidal hyphae invasion with micro-abscesses. The microbiological investigations of nail specimens and of the inter-capitular region of the palm demonstrated with *C. krusei* isolates, when grown Chrom-agar (CHROMagar™ *Candida*, Paris, France). Further, *C. krusei* was also isolated only from the formalin of the cadavers containing tank. Chemical analysis of the formalin demonstrated its concentration as 1.5%.

Emerging *Candida* species such as *C. krusei* and *C. parapsilosis*, although are not known to cause predominant infections, a number of studies have indicated its increasing prevalence in superficial infections, especially among the compromised individuals (Samaranayake & Samaranayake, 1994). There are a large number of sources for candidal infections of humans (Samaranayake & MacFarlane, 1990). However, there are no previous clinical reports to indicate that the formalin used in the preservation of biological materials such as human cadavers act as a source of candidal infection of man. Interestingly, our findings indicate formalin acts as possible exogenous source of candidal infections of man