

## Histopatholpgical Changes In Rat Model With Oral Candidiasis



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### Abstract:

Candidiasis is a multifaceted fungal disease including mucosal-cutaneous, visceral, and disseminated infections. Oral candidiasis is the final outcome of the vulnerability of the host as the virulence of the invading organism. A major virulence factor of *Candida albicans* is its ability to adapt to different environments, the resulting is formation of surface-attached microbial communities known as biofilms. Therefore, the study of experimentally induced oral candidiasis in rats is useful to clarify the etiopathology of this condition. When growing on a medical device or mucosal surface, *Candida albicans* resist the host defenses. The treatment of mucosal infections caused by candida and the elucidation of the disease is challenging. Therefore, the study of experimentally induced oral candidiasis in rats is useful to clarify the etiopathology of this condition, improve diagnosis, and search for new therapeutic designs in which it is similar to human. This study is describing the host's response to *Candida* biofilms, it emphasizes the role of the denture base material in enhancing the colonization, proliferation of *Candida albicans* and the inflammation of the palatal mucosa. Palatal candidiasis is seen after one week of fitting the dentures on the rat palate, while during the second week alternating epithelial hyperplasia and atrophy occurs, Intra-epithelial polymorphonuclear leukocyte infiltration and chronic inflammatory cell infiltration in the underlying connective tissue was observed. The transmission of candida from blastospore to mycelium occurs after one week and mycelium is predominated at the third week, however hyperorthokeratinization at the fourth week was observed. This constitutes a good evidence for anti candidal protection during oral candidiasis, which will have the potential for including such studies as a powerful tool in understanding the pathogenesis, host interactions, and the management of oral mucosal candidal infections.

### Key words:

Histopathology, oral candidiasis, rat