



Species of therapy-resistant flora from infected root canals: their survival and resistant mechanisms to Ca(OH)₂

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The purpose of this presentation is to investigate whether the certain therapy resistant bacteria can impair the immune defense system in the periapical tissue.

Recent studies have reported that the facultative or obligatory anaerobic bacteria such as *Fusobacterium nucleatum*, *Enterococcus faecalis* and *Actinomyces* species and Gram positive facultative bacteria *Enterococcus faecalis* have been shown to dominate in persistent periapical lesion and usually recovered from failed root canal treated cases. Moreover, *E. faecalis* has been reported to withstand the antimicrobial agent and endure potential starvation and resist the antibacterial effect of calcium hydroxide intracanal medication.

It is increasingly evident that sonicate extracts of certain microorganisms contain immunosuppressive protein which actively compromising the host immune response to the benefit of bacterial survival and persistent host infection. Therefore, the bacteria and/or bacterial products which act as exogenous immunoregulatory agents could have profound effects on the course of infection. Furthermore, the pathogenesis of microbial infection is dependent upon its ability to subvert or escape the host defense mechanism.

