# EFFICACY OF TETRACYCLINE FILLED EVA FIBER AS A LOCAL DRUG DELIVERY SYSTEM

## *(A CLINICO - MICROBIOLOGICAL STUDY)*

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*DISSERTATION SUBMITTED TO*
*THE KARNATAK UNIVERSITY*
*IN PARTIAL FULFILMENT OF THE REQUIREMENTS*
*FOR THE DEGREE OF MASTER OF DENTAL SURGERY*
*IN THE SPECIALITY OF PERIODONTICS*
*FEBRUARY 1997.*

Periodontium is highly vulnerable to disease process. Bacterial plaque and their biologically active products have been implicated as the primary etiologic agents of periodontal disease.[50]

Subgingival microbiota harbours more than 200 bacterial species, many of which have the periodontal pocket as their main habitat. A distinct difference exists between composition of supragingival and subgingival plaque. Supragingival plaque exhibits accumulation of predominantly gram positive coccoid cells whereas subgingival plaque is characterized by flora dominated by gram negative anaerobic organisms including Actinobacillus actinomycetemcomitans, Bacteroides gingivalis, Bacteroides intermedius, Eikenella corrodens, Fusobacterium nucleatum, Wolinella recta and a high percentage of spirochetes.[9,50]

Treatment of periodontal disease is routinely based on oral hygiene and root debridement. As an adjunctive approach, local or systemic administration of antibiotics is used because of the microbial etiology of periodontitis.[55]

Newman et al.[41] have suggested that the antimicrobial therapy has been directed at specific bacteria associated with clinically diseased sites to help the mechanical treatment aimed at the removal of subgingival calculus. Systemic administration of antibiotics used in combination with scaling and root planing has been shown to have beneficial effects on the microflora. The inability to