

ABSTRACT

AIM:

To isolate *Enterococcus faecalis* and *Candida albicans* from the plaque sample and determine their antimicrobial efficacy of the test medicaments- Nisin and Chitosan against these microorganisms.

MATERIALS AND METHODS:

Plaque samples were collected from healthy human volunteers and incubated overnight. They were further streaked onto Mitis salivarius agar and Sabouraud and Dextrose Agar for the isolation of *Enterococcus faecalis* and *Candida albicans*. A total of 90 single rooted premolars were selected. Root canal preparation was done, and teeth were randomly divided into three groups. It is then further divided into five groups each according to the medicaments used (Saline, Calcium hydroxide, Nisin, Chitosan, Chlorhexidine). The canals were then sealed and all the samples were incubated at 37°C and the readings were taken on day 1, 7, 14, and 21.

RESULTS:

The results obtained from Turbidity Testing and Colony Counting revealed that complete elimination of bacteria was not achieved in any of the experimental groups. Chitosan was most effective in causing reduction in colony counts followed by Nisin and Chlorhexidine.

CONCLUSION :

Nisin and Chitosan have a good antimicrobial effect against *C. albicans* and *E. faecalis*. However, the medicament that is effective against single microbe *in vitro* may not necessarily be effective against the same microbe *in vivo* because root canal system contains multiple microorganisms.