

## ADHERENCE OF BACTERIA TO STONE CAST SURFACE

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### REVIEW

The micro-organisms related from denture stomatitis included streptococci, pneumococci and staphylococci.<sup>1</sup> Most of these organisms are potential pathogens. Under the scanning electron microscope normal palatal epithelium had an irregular pitted surface but few bacteria seemed to be attached to the surface cell.<sup>2</sup> High number of streptococcus were found to adhere easily to the surfaces of acrylic resins.<sup>3</sup> The study of Koopmans et. al<sup>4</sup> revealed clearly the presence of streptococcus and sanguins on the acrylic surface; while the *S. mutans* were found only incidentally. Acrylic resin has a cell-like appearance under the microscope and the intercellular areas are granular and porous. Roughness and porosity of the acrylic surface may favor the initial formation of plaque by protecting the organisms from dislodgement.<sup>2</sup> Blocks of an acrylic resin material used routinely in denture construction were placed in a maltose broth inoculated with a strain of *C. Albicans* were removed after several weeks of incubation and sectioned showed yeast cells. On the other hand, cultured maxillary and mandibular alginate impressions and casts.

In six percent fortified agar against candidal colonies and detected bacteria on the impression surface.<sup>5</sup>

The purpose of this study is to detect adherence or otherwise of bacterial species of fungi on the stone cast after pouring the impression at interval times; one hour, two hours, three hours and up to six hours follow-up.

### MATERIALS AND METHOD

Apparently healthy individuals require removable partial denture were selected among the patients of the Prosthetic Department at the Dental College, King Saud University, Riyadh, Saudi Arabia. Three male and two female patients were used for this study. Alginate (irreversible hydrocolloid) type II Jeltrate, The LD. Caulk Corporation regular set Dentsply, Milford, U.S.A. impression was taken for each case and immediately poured in stone (Blue, Labstone, Colembus Dental Miles Inc. U.S.A.) Swap samples were taken from form the impression surface before pouring and immediately after pouring the cast. Then, periodical swap samples after one hour, two hours, three hours and six hours time were made by scraping the cast surface using a sterilized scalpel for each patient and everytime. These swaps were transferred to Transwab Medical Wire Equipment Col, Ltd. Potley, Corsham, Wilts, England as a transport medium. The stone which was used for pouring

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