



Abstract

Oral Biofilms and Your Systemic Health: Current Perspectives

Professor Lakshman Samaranayake,

Hon DSc, BDS, DDS, FRCPath, FDSRCSE, FDS RCPS, FRACDS

Vice-Dean, University of Sharjah College of Dental Medicine, UAE

Immediate Past Dean and Emeritus Professor, The University of Hong Kong

Immediate Past Dean and Hon. Professor, School of Dentistry, University of Queensland

Biofilms are ubiquitous in nature. It is now known that bacteria and fungi mostly exist attached to surfaces, in the biofilm phase in contrast to their suspended or planktonic phase existence. This is true for most infections of humans, including oral diseases. Thus, the two commonest human afflictions and the primary diseases of the oral cavity, caries and periodontal disease, are caused by oral biofilms –which were traditionally called dental plaque. There is a growing body of data that periodontal diseases, can have profound effects on total health including cardiovascular disease including stroke, adverse pregnancy outcomes, diabetes and, pulmonary disease.

Apart from these systemic effects, oral biofilms *per se* are now known to possess intriguing properties that have clinical implications. For instance, biofilm phase bacteria and fungi compared with planktonic phase organisms are resistant to antimicrobials. Moreover, emerging data indicate other intriguing dimensions of the behavior of biofilm organisms such as their ability to `cross-talk`, through chemical messengers between the biofilm community dwellers

Yet, the association between biofilms and either local or systemic diseases they cause is not straightforward. This presentation will provide an overview of the role of oral biofilms and how they affect oral and systemic health.