

ISSN 1110-2071

JOURNAL OF BIOMEDICAL SCIENCES AND THERAPEUTICS

Volume: Nine

Part: Seven

The Official Journal of the Society of Biomedical
Sciences and Therapeutics.
(Egypt)

1993

JOURNAL OF BIOMEDICAL SCIENCES AND THERAPEUTICS

The Official Journal of the Society of Biomedical
Sciences and Therapeutics, Cairo - Egypt

Editor In-Chief: Prof. S. HAMZA Executive Editor: Dr. F. HAMADA

Advisory Board

Professors:

*Abbas El-Maraghy
Abdala Gomaa Radwan
Abdalla Khalil
Abdel-Baset El-Aasser
Abdel-Karim El-Hemaly
Abdel-Rehim Ghazal
Adel Kher El-Din
Ahmed El-Hawi
Ahmed Fathy El-Zayat
Ahmed Shawky
Emad Nafaa
Ezz El-Din Sharaf
Farouk El-Samanoudi
Farouk Gamal El-Din
Hamad Mahmoud Hamad
Hassan Nashnat Alam
Heder Ghaleb
Kamal Zaki Kodera
Mahmoud Abo-El-Makarem
Mahmoud Khyyal
Mahmoud Taher El-Mougi
Momamed Abdel-Mounem Abo-El-Fadel
Mohamed El-Dakhakhny*

*Mohamed Esmat Mahmoud
Mohamed Mohy El-Din AttA
Mohamed Moustafa El-Sayed
Mohamed Noor El-Din
Mohamed Rashad Hegazi
Mohamed Salah Abdel-Rehim
Mohamed Salah El-Din
Mohamed Sharawy
Mohamed Taky El-Din Khyyal
Moustafa El-Sayed El-Sayed
Nabila Abdel-Fatah
Nabil Younes
Ragaa Abdel Wahab
Saadia Abdel-Hafiz
Salah Hamza
Salem Negm
Samia Abdel Wahab
Samir Fahmy Saad
Samira Saleh
Sayed Amar
Usama El-Tayeb
Zeinab Helmy Hussein*

**LIGHT AND SCANNING ELECTRON MICROSCOPIC STUDY
OF BACTERIA INVADING THE SOFT TISSUE WALL OF THE
POCKET IN RAPIDLY PROGRESSIVE PREIODONTITIS**

**Mona Y. Abd El-Razzak, Ebtessam A. Elzefzaf
and Ahmed A. Abd-Al-Aziz**

**Department of Oral Medicine, Periodontology Oral Diagnosis
and Dept. of Microbiology
Faculty of Dentistry and Pharmacy, Tanta University**

ABSTRACT: The presence of bacteria within the soft tissue wall of deep periodontal pocket in rapidly progressive periodontitis (RPP) was studied by light and scanning electron microscope (SEM). Five gingival specimens from five different patients and other three specimens from three periodontally healthy persons were the subjects of this study. Different morphological forms of bacteria were noted throughout the pocket wall of the diseased specimens by light and SEM. The majority of bacteria were cocci, coccobacilli with some rods and some spirocheats. Mycoplasma like organisms also appeared. Wide intercellular spaces with areas of haemorrhage were noticed as well as ulceration of the pocket wall with collection of bacteria around the ulcer. It could be concluded that bacterial penetration into the epithelium and connective tissue in cases of RPP may cause rapid and severe tissue destruction and the invading bacteria may reside within the tissue after scaling and root planing and even after flap operation which may play a role in recurrence of this disease. This in turn strengthen the need for systemically administered agents as an adjunct to local treatment of R P P.

INTRODUCTION

The role of bacterial plaque in the etiology of inflammatory periodontal diseases is well established (1). It has been suggested that, the microorganisms do not invade the periodontal tissues and the inflammatory reaction is provoked by bacterial products diffusing through the epithelium into the connective tissue (2, 3).

Bacterial invasion of the periodontal tissues and its possible direct involvement in tissue breakdown remain a controversial subject. Many studies have shown bacteria within the pocket soft tissues and have related their presence with tissue breakdown and even with alveolar bone resorption (4-7).

Received Jan. 1993

Accepted March 1993