

THE INFLUENCE OF DENTURE PLAQUE BIOFILM ON ORAL MUCOSAL MEMBRANE IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

Dorota Przybyłowska^{1*}, Elżbieta Mierzwińska - Nastalska¹, Renata Rubinsztajn², Ryszard Chazan², Ewa Swoboda - Kopec³

¹ Department of Prosthodontics, Warsaw Medical University, Chair: E. Mierzwińska-Nastalska, MD, PhD,

² Department of Internal Medicine, Pulmonology and Allergology, Warsaw Medical University, Chair: R. Chazan, MD, PhD

³ Department of Dental Microbiology, Warsaw Medical University, Chair: E. Swoboda- Kopec, MD, PhD

* author responsible for correspondence, Department of Prosthodontics, Warsaw Medical University, Nowogrodzka 59, 02-006 Warsaw , Poland, dorota.przybylowska@gmail.com

Patients with chronic obstructive pulmonary disease have the lower airways colonized with pathogenic bacteria in a stable period of the disease and in exacerbations. The etiology of bacterial exacerbations of COPD depends on the underlying disease, the frequency of exacerbations and antibiotic therapy. Microorganisms can be aspirated of the biofilm denture plaque into the lower respiratory tract and could reduce the patient's immunity and cause pneumonia. COPD patients, who are using acrylic dentures in oral cavity, are exposed to denture stomatitis and oral candidiasis. Aim of this study was to establish the composition of denture plaque biofilm and its impact on the oral mucosa in COPD patients. The study included patients in a stable phase of COPD using removable denture and control group included healthy wearer's appliances. The examinations concerned the oral mucosal membrane and hygienic condition of prosthetic restorations. Microbiological examinations were performed by taking a direct swab from the surface of acrylic dentures. 17 bacterial and fungal strains were isolated from denture plaque of COPD patients, which could be a reservoir of pathogens in the upper and lower airways. The results showed a greater frequency of prosthetic stomatitis complicated by mucosal infections among COPD patients comparing to healthy.