

### **CP3.**

## **STUDY OF TOTAL PROTEIN CONCENTRATION, pH AND SALIVARY FLOW RATE IN THE WHOLE SALIVA COLLECTED FROM PATIENTS WITH RAPIDLY PROGRESSIVE PERIODONTITIS (RPP)**

S.M.P.M. RUWANPURA, W.R.WIMALASIRI AND A.CHANDRASEKERA\*

*Division of Biochemistry and \*Division of Periodontology, Faculty of Dental Sciences, University of Peradeniya*

Periodontitis is the clinical state produced due to the interaction between the microbial dental plaque and human host defenses. It is established that periodontitis is modulated by complex interactions between plaque bacteria and host immune - inflammation defense mechanisms. The products of the interactions are released through periodontal tissue and crevicular fluid to saliva. Therefore saliva could be used as a good diagnostic tool to diagnose various types of periodontitis in the very early stages of the disease.

Moderate to Severe Adult Periodontitis (MSAP) and Rapidly Progressive Periodontitis (RPP) are two important types of periodontitis. MSAP is highly prevalent and less destructive and RPP, which is a type of early onset periodontitis, is less prevalent and highly destructive in nature.

It is important to diagnose the type of periodontitis, as the treatment planning is different from one type to the other. It is also emphasized that early diagnosis is of paramount importance to avoid edentulousness in young age. The salivary constituents could be used to diagnose types of periodontitis. This study is a preliminary attempt to compare the salivary constituents of subjects with apparently healthy periodontium, MSAP and RPP.

30 subjects were studied. They were clinically diagnosed and divided into the healthy group, MSAP group and RPP groups, each group containing 10 subjects. Each group includes 6 females and 4 males. The age distribution of RPP group was 25-29 Yrs. (4 subjects), 30-35 Yrs. (4 subjects) and 36-40 Yrs. (2 subjects). In the MSAP group it was 1 subject in the 25-29 Yr. group, 2 subjects in the 30-35 Yr. group, 4 subjects in the 36-40 Yr. group and 3 subjects in the 41-45Yr. group. In the healthy group we had 3 subjects each in the 25-29 Yr. group and the 36-40 Yr. group and 2 subjects each in the 30-35 Yr. group and the 41-45Yr. group. Unstimulated whole saliva from each individual was collected. The pH, total protein level (mg/ L) and flow rate (ml/ Min.) was measured. The patients who are already being treated were not included in the study.

According to the preliminary results, RPP patient's mean salivary flow rate was 0.43 ml/ Min. compared to the rate of the healthy group which was 0.55 ml/ Min. This is not statistically significant ( $p=0.05$ ). Mean total protein in the RPP, MSAP and healthy groups were 5574 mg/ L, 4068.8mg/ L and 2643.5 mg/ L respectively. This is statistically significant ( $p=0.01$ ). The mean pH of saliva of the diseased group was 6.8 and that of the healthy individuals was 7, a deferent that is statistically significant ( $p=0.01$ ).