Factors affecting the survival rate of oral cancer patients

Jiang-Huei Jeng¹, Chien-Yang Yeh¹, Mei-Chi Chang² and Jang-Jaer Lee¹
National Taiwan University Medical College, Taipei, Taiwan

Introduction: In Taiwan, a combination of betel quid (BQ) chewing, alcohol consumption and cigarette smoking habits may increase the oral cancer risk by 123-folds higher than persons without any habits. During the pathogenesis of oral cancer, lymphocyte phenotypes in the peripheral blood of patients may potentially influence the cancer progression and prognosis of oral cancer. As we know, poor oral habits will easily initiate and promote the cell to malignant transformation. Over 90% of oral cancer patients have the bad oral habits, so oral cancer is still the fourth highest cause of death in Taiwan. We try to know the immunological changes of lymphocytes populations in different stage of oral carcinogenesis and their relation to survival of oral cancer patients.

Materials and methods: Totally 86 oral cancer patients and 80 healthy men were enrolled in this study. Their lymphocyte populations (expression of CD4+, CD8+, CD19+, CD56+ cells) data were analyzed by flow cytometry and collected from 2002 to 2004. After 10+ years follow-up to Dec. 2014, cancer patients with/without expire were recorded and evaluated their relation to oral habits and the percentage of initial lymphocyte markers by Student's t-test, Chi-square and Fisher exact test.

Results: 50 cancer patients were expired and showed a significant decrease in percentage of CD19+ lymphocytes (10.13 ± 3.51, n=50), relatively lower than patients that still survive (12.95 ± 4.05, n=36) (P<0.05). Difference in CD56+ lymphocyte populations was also considered to have statistically significant. Alcohol consumption also showed an association with the survival rate of oral cancer patient (P=0.05), whereas BQ and smoking showed little effect.

Conclusions: These results suggest that alcohol consumption, CD19+ B cells and CD56+ Natural Killer cells expression may be the factor to long-term affect the survival rate of oral cancer patients. (This study is supported by a grant from Ministry of Science and Technology, Taiwan and National Taiwan University Hospital, Taiwan).

Biography
Dr. Jiang-Huei Jeng is a specialist in both Endodontics and Periodontics. He got IADR Hatton Award and his Doctor of Dental Surgery degree in 1994. Dr. Jiang-Huei Jeng practiced endodontic, periodontic, and implant dentistry in the National Taiwan University Hospital since 1991 and the chair in Department of Endodontics. He is also a professor, researcher and teaching staff in the National Taiwan University Dental School. He has published many papers in scientific journals including Biomaterials, Acta Biomaterialia, J Endod, Int Endod J, Carcinogenesis, J Periodontol etc. He received International Association of Dental Research (IADR) distinguish scientist award of PTT group in Brazil (2012). He also served as a reviewer and editorial board member of many journals.

jhjeng@ntu.edu.tw