



ORAL HEALTH STATUS AND PERIODONTITIS IN ALZHEIMER'S DISEASE PATIENTS: A CASE CONTROL PILOT STUDY IN A SICILIAN RURAL COMMUNITY

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Aim. Dementia is a common disorder among the elderly. Alzheimer's disease (AD) is the most common cause of dementia. In addition to known risk factors (e.g. age and familiarity) of AD, recently it has been suggested a possible promoting role for chronic inflammatory infective diseases. Periodontal disease (PD) is a frequent chronic multi-bacterial infection involving the tissues supporting the teeth; in addition to promoting inflammation locally, the periodontal pathogens possess mechanisms able to influence the systemic balance of inflammatory mediators. Similarly to other systemic diseases (e.g. cardiovascular disease, diabetes, renal diseases and low birth weight), a possible link has been proposed between PD and the development and progression of AD. Aim of the present study was to evaluate the oral health status and the prevalence/severity of PD in a group of patients affected by AD compared to a control group of healthy subjects.

Materials and methods. A case-controlled clinical trial was designed to compare patients with AD (Test group - T; n = 16; M: 8; F: 8, range age 64-93 yrs) with healthy controls (Control group - C; n = 16; M: 8; F: 8; range age 64-92 yrs). The population study was named ZAP (Zabut Aging Project) and all participants, enrolled in a Sicilian rural community (Sambuca di Sicilia, AG, Italy), were matched for age and sex. Following variables were recorded: smoking and drinking habits, number of teeth, Decayed Missed Filled Teeth scoring (DMFT), measurement of the probing depth (CPI and PSR index). The association between AD and PD, socio-demographic and behavioural-clinical variables was assessed using the χ^2 test or Fisher's exact test, as appropriate. To measure the association level, crude OR and the 95% Confidence Interval (CI) were calculated. Statistical significance of the difference in the average DMFT between cases and controls was assessed using the Student's t-test. A p value ≤ 0.05 was considered statistically significant.

Results. One patient of T group was a smoker versus four of C group; four T patients were drinker versus two of C group. Seven of T group (43.7%) were totally edentulous, conversely only 2 (12.5%) of controls have the same condition (p=0.04). With respect to oral status, DMFT index was 23.7 ± 9.0 in T patients versus 25.2 ± 7.8 in controls (p=0.633). There were no significant differences between T and C groups regarding periodontal index: high PSR and CPI scores (>3) were recorded in 77.8% of AD patients and 46.1% of health cases (p >0.05). A similar distribution among two groups was observed regarding the other investigated variables (e.g. smoking and drinking habits).

Conclusions. In this rural Sicilian adult/elderly community, poor oral health is frequent with a DMFT score higher than general population. The obtained data do not support the hypothesis of a major prevalence and severity of PD among AD patients. However, to confirm these preliminary results the recruitment of a wider sample size and further data, regarding proteomic salivary profiles and RT PCR-based microbiological investigation on sub-gingival plaque samples, still need in order to better clarify the role of PD and periodontal pathogens in the AD natural history.