論 文 名： Number of Remaining Teeth as a Predictor of Prospective Falls in Japanese Community-dwelling late Elderly: 1-year -cohort study（要約）

新潟大学大学院医歯学総合研究科

氏名　渡　辺　真　光

Introduction

The purpose of this investigation was to assess the association of the number of remaining teeth with the incidence of falls in a 1-year prospective study within the community-dwelling late elderly population in Japan.

Methods

Dental and physical fitness examinations, including hand grip strength, gait speed, Timed Up & Go (TUG) test were performed in 2017 and set as the baseline for this study. A questionnaire inquiring about the history of falls within the past year, the usage of dentures, current medical conditions, and a history of disease was conducted. Mini-Mental State Examination (MMSE), the Tokyo Metropolitan Institute of Gerontology Index of Competence (TMIG-IC), and Fall Risk Index (FRI) -5 were also used to assess cognitive function, higher-level functional capacity, and fall risk, respectively. Follow-ups in 2018 were carried out, the history of falls was ascertained by questionnaires. Subjects were then divided in 3 groups according to the number of remaining teeth: (I) subjects with at least 20 remaining teeth, (II) with less than 20 remaining teeth, (III) edentulous. After compiling all data and information, a logistic regression analysis was performed. In the multiple logistic regression, the dependent variable was the history of falls at a 1-year follow-up while the independent variable was dental condition (group I-III). Confounders were age, gender, gait speed, handgrip strength, MMSE, TMIG-IC, and FRI-5.

Results

One-hundred eighty-two Japanese elderly (65 males and 117 females, with an average age 81.9 years) participated in this 1-year longitudinal study. Forty participants (22.0%) reported falls during the follow-up period. Multiple logistic regression analyses, adjusted for all covariates, showed that group II and group III had significantly increased risks of falls (OR: 2.95, 95% CI: 1.06-8.20), (3.04, 1.05-8.82), while the model excluding high-risk participants showed that group II and group III had significantly increased risks of falls (5.48, 1.37-21.8), (5.36, 1.37-23.9) compared with group I.

Conclusion

Results of this study suggest that a reduced number of teeth may increase the risk of falls; moreover, it might be possible to use the number of remaining teeth as a predictor of falls in the elderly.