論文名：Associations between plasma antibody levels against *Porphyromonas gingivalis* and atrial fibrillation among community-dwelling older individuals in Japan: cross-sectional study（要約）

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Background

The present study aimed to investigate the association between periodontal conditions based on the levels of plasma antibodies against *Porphyromonas gingivalis* and history of atrial fibrillation (AF) in community-dwelling older individuals in Japan.

Methods

This cross-sectional study included 3,091 participants aged 60–79 years using the baseline survey data of the Uonuma cohort study conducted in 2012–2014. Information on AF history was obtained from a medical interview, and plasma IgG antibody levels against *P. gingivalis* gingipain were measured. Data on previously reported AF risk factors were collected from a self-administered questionnaire, medical interview, and health examination. Participants were classified into two groups based on the third quartile of antibody levels against *P. gingivalis*. Multivariate logistic regression analysis was performed using AF history (0, absence; 1, presence) as a dependent variable, whereas antibody levels against *P. gingivalis* (0, ≤third quartile; 1, >third quartile) and AF risk factors (0, absence; 1, presence) as independent variables.

Results

The mean age of 3,091 participants was 68.6 ± 4.9 years. Of these, 1,411 (45.7%) participants were men, and 56 (1.8%) had AF history. Participants with higher antibody levels against *P. gingivalis* showed a significantly higher prevalence of AF than those with lower antibody levels (3.0% vs. 1.4%; $p = 0.005$). Multivariate logistic regression analysis revealed that participants with higher antibody levels against *P. gingivalis* had twofold higher odds of having AF (OR = 2.13; 95% CI = 1.23–3.69; $p < 0.01$).

Conclusions

A correlation was observed between plasma antibody levels against *P. gingivalis* and AF history in Japanese community-dwelling older individuals. These results suggest that periodontal condition contributes to increased risk of AF development.