

原文題目(出處)：	Cardiovascular risks associated with incident and prevalent periodontal disease. J Clin Periodontol 2015;42: 21-8
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報告日期：	2015/5/15

內文：Aim:

- Little is known about how incident periodontal disease influences future vascular risk.
- Common risk factors such as diabetes and smoking are shared between cardiovascular and periodontal diseases.
- How periodontal disease may modify the process of developing cardiovascular disease is still unknown.
- Genetic studies have suggested shared links between periodontal disease and coronary heart disease (For example, MI)
- This research compared effects of incident versus prevalent periodontal disease in developing major cardiovascular diseases (CVD), myocardial infarction (MI), ischaemic stroke and total CVD.

Material and Methods:

- WHS
- Study population: Between September 1992 and May 1995, in a prospective cohort of 39,863 predominantly white women, age ≥ 45 years and free of cardiovascular disease at baseline were followed for an average of 15.7 years.
- 72% of WHS participant provided blood samples
- Participant were asked whether they have prevalent Periodontal disease at the beginning
- New incident were assessed at 36-48-60-72-84-96-108-120 months
- Participants were followed for cardiovascular endpoints of by annual follow-up questionnaires, letters or telephone calls
- Condition were assessed with medical record, clinical information(CT,MRI)
- Major cardiovascular disease (CVD) : non-fatal myocardial infarction, ischaemic stroke or death from cardiovascular causes
- Total CVD events : major CVD as well as bypass surgery, or percutaneous coronary angioplasty
- Covariates: age, body mass index, race/ethnicity, education, diabetes, hypertension, hypercholesterolaemia, smoking, family history of myocardial infarction and physical activities
- Statistical analyses: Used time-varying survival analysis to investigate the effects of prevalent as well as incident periodontal disease as determinants of future vascular events
- Cox proportional hazard models with time varying periodontal status [prevalent (18%), incident (7.3%) versus never (74.7%)] were used to assess future cardiovascular risks.
- All analyses were performed using the “survival” package of R software
- To assess effect modification by relevant risk factors, analyses were stratified by the presence or absence of obesity, smoking, hypertension, hypercholesterolaemia, a family history of myocardial infarction and diabetes.

Results: Baseline-

- Women having either prevalent or incident periodontal diseases were older

- compared to those without periodontal disease more likely to be over-weight or obese, more likely to be current or former smokers and exercised less frequently
- Serum levels of total cholesterol, LDL cholesterol, triglyceride were higher in women with prevalent periodontal disease at the baseline and a higher prevalence of hypertension, diabetes and hypercholesterolaemia were also noted in participants with periodontal disease
 - Incidence rates of all CVD outcomes were higher in women with prevalent or incident periodontal disease. For women with incident periodontal disease, risk factor adjusted hazard ratios (HRs) were 1.42 (95% CI, 1.14–1.77) for major CVD, 1.72 (1.25–2.38) for MI, 1.41 (1.02–1.95) for ischaemic stroke and 1.27 (1.06–1.52) for total CVD. For women with prevalent periodontal disease, adjusted HRs were 1.14 (1.00–1.31) for major CVD, 1.27 (1.04–1.56) for MI, 1.12 (0.91–1.37) for ischaemic stroke and 1.15 (1.03–1.28) for total CVD.

Discussion:

- These data not only confirm prior work for prevalent periodontal disease, but importantly provide new evidence that incident periodontal disease is also associated with high vascular event rates.
- It is possible that the lower hazard ratios shown in women having prevalent PD compared to women with incident PD may be due to treatment history or greater awareness of the oral hygiene care.
- The CVD risks of woman having prevalent PD in this study were similar to that of Helfand et al. 2009 research.

Strength and limitation:

1. Strength- Prospective design; large sample size; confirmation of all incident vascular events (better than studies that employ only prevalent periodontal disease)
2. Limitations- The study population of middle-aged female; self reported periodontal status is a far less useful method than direct examination which can address disease severity; misclassified periodontal disease status might have led to an underestimation of the magnitude of true effects

Conclusion: New cases of periodontal disease, not just those that are pre-existing, place women at significantly elevated risks for future cardiovascular events.

題號	題目
1	下列那些菌種近年來有愈來愈多證據顯示與動脈粥狀硬化 (atherosclerosis) 及血栓性栓塞 (thromboembolism) 有關? (A) Streptococcus sanguis 和 Prevotella intermedia (B) Prevotella intermedia 和 Propyromonas gingivalis (C) Aggregatibacter actinomycetemcomitans 和 Tannerella forsythia (D) Streptococcus sanguis 和 Propyromonas gingivalis
答案(D)	出處 : Carranza's clinical periodontology 10th edition p.318
題號	題目
2	Coronary heart disease and periodontal diseases share numerous risk factors, which of the following is not included? (A) Smoking (B) Diabetes (C) Low socioeconomic status (D) Sugar ingestion
答案(D)	出處 : Carranza's clinical periodontology 10th edition p.316