Poor periodontal condition and *edentulousness* weakly predict the development of *insulin resistance*

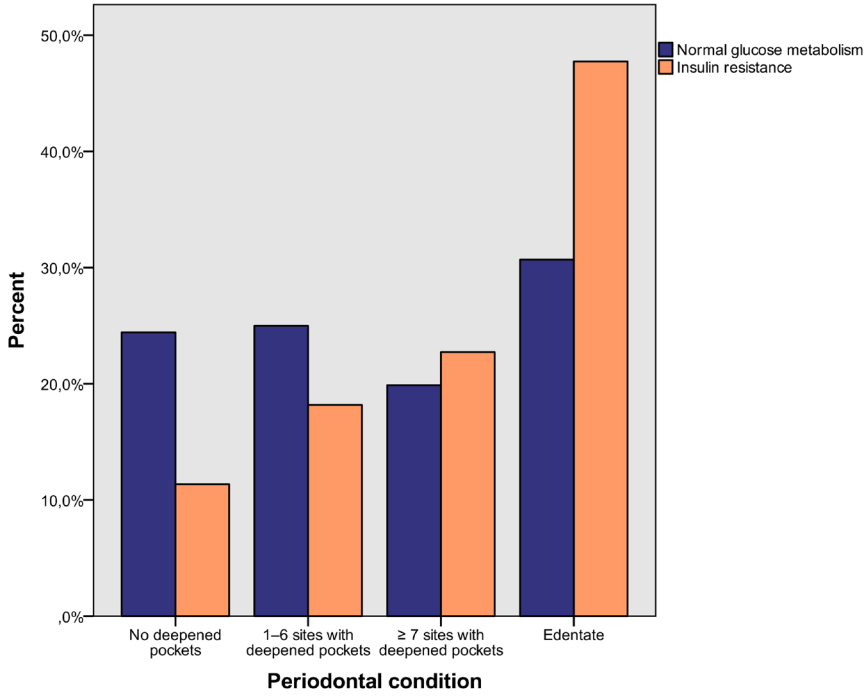
27th EACMFS CONGRESS
17-20 September 2024
PreCongress day: 16 September
ROME - ITALY
A Journey to Excellence: Culture, Tradition & Innovation
European Association for Cranio - Maxillo - Facial Surgery

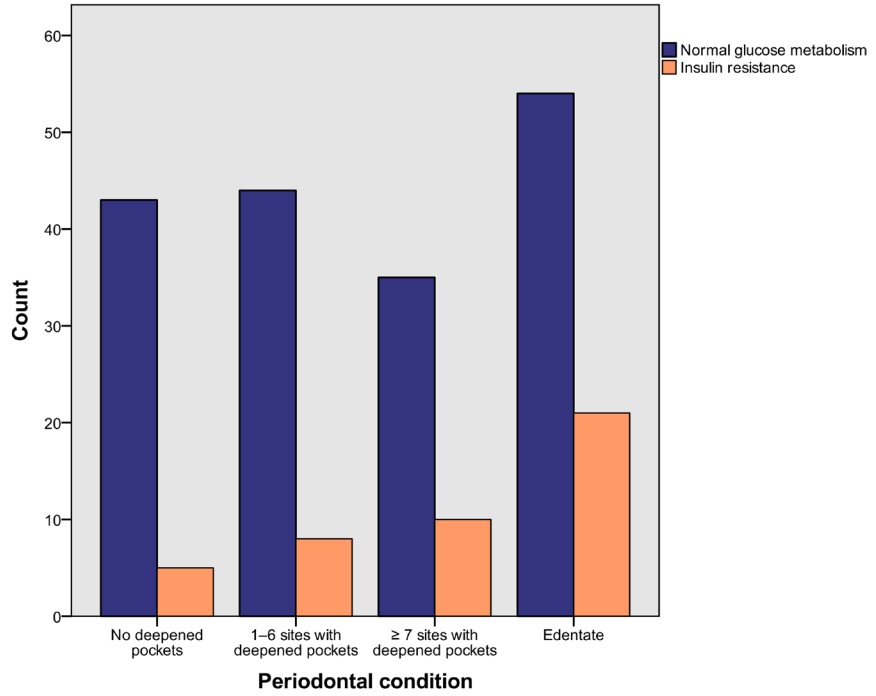
Background: Maintaining a good periodontal health has gained attention as a method of improving glucose equilibrium among diabetic individuals. The prevalence and incidence of insulin resistance is a growing health-concern worldwide, affecting both well-being and public health. However, a limited number of studies with longitudinal setting have addressed the association between periodontal condition and insulin resistance among non-diabetic individuals.

Methods

- Cohort study
- Follow-up study
- Interviews
- Clinical examinations
- Laboratory tests

Result 1: The incidence of IR among participants presented in graphs.





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Result 2: The association of the presence of deepened (≥ 4 mm) periodontal pockets and edentulousness at baseline in 1990–1992 with the presence of different categories of insulin resistance (IR) defined by Qualitative Insulin Sensitivity Check Index (QUICKI) on follow-up in 2007–2008; incidence rate ratios (IRR) with 95% confidence intervals (95% CI). QUICKI was determined according to the following equation: 1/[log(I0) + log(G0)], in which I0 is fasting insulin and G0 is fasting glucose.

Periodontal condition	QUICKI quintile (≤0.3166)	
	***n* (%)**	**IRR (95% CI)**
Total (Effective *n* = 220)		
No deepened pockets (*n* = 48)	5 (10)	1.0
1–6 sites with deepened pockets (*n* = 52)	8 (15)	1.5 (0.6–4.1)
≥ 7 sites with deepened pockets (*n* = 45)	10 (22)	1.3 (0.6–3.1)
Edentate (*n* = 75)	21 (28)	1.6 (0.7–3.5)
Non-smokers (Effective *n* = 199)		
No deepened pockets (*n* = 45)	5 (11)	1.0
1–6 sites with deepened pockets (*n* = 50)	8 (16)	1.6 (0.6–4.4)
≥ 7 sites with deepened pockets (*n* = 38)	9 (23)	1.5 (0.7–3.3)
Edentate (*n* = 66)	18 (27)	1.4 (0.6–3.2)

Limitation: A common concern in non-experimental studies on diseases with a complex social and biological background is the control of confounding and especially the possibility of residual confounding related to variables difficult to control for.

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