

Association of periodontitis and arterial stiffness in type 2 diabetic patients / Anandhara Indriani Khumaedi, Dyah Purnamasari, Ika P Wijaya, Yuniarti Soeroso, Siti Marhamah

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Abstrak

ABSTRAK

Background: periodontitis is a major cause of chronic infection in diabetic patients. Diabetic patients have four-fold risk of having cardiovascular disease. Chronic inflammation caused by periodontitis, a non-traditional cardiovascular risk factor is widely known to play a major role in atherogenesis. Among non-diabetics, an association has been found between periodontitis and arterial stiffness, but in diabetic patients the result is inconsistent. No study has investigated either the proportion of periodontitis or its correlation with arterial stiffness in type 2 diabetes population in Indonesia. Methods: this study was a cross-sectional study involving 97 patients with type 2 diabetics, who were recruited on Endocrinology Clinic from April to August 2017. Periodontitis was measured for pocket depth, clinical attachment loss and bleeding on probing by a periodontist. Carotid-femoral PWV (Pulse Wave Velocity) was measured using SphygmoCor Xcel with cuff-based tonometry technique. Results: periodontitis was found in 99% type 2 diabetic subjects and 78% of them had severe periodontitis. There was no significant correlation found between pocket depth, clinical attachment loss and cfPWV ($r=0.024$, $p=0.407$ and $r=0.011$, $p=0.456$); whereas there was a weak positive correlation between pocket depth and PWV ($r=0.294$, $p=0.041$) in well-controlled type 2 diabetics. Conclusion: most of type-2 diabetics had severe periodontitis; however, the correlation between periodontitis and arterial stiffness could not be concluded in this study.