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Cardiovascular risk in obese and overweight subjects with periodontal disease in Yaoundé: a community cross-sectional study

Studies show an association between obesity, cardiovascular risk and periodontal disease. In Sub-Saharan Africa, and Cameroon in particular, no data exists reporting the association between these three entities. This study aimed to evaluate the cardiovascular risk in obese or overweight subjects with periodontal disease in Yaoundé.

We conducted a cross-sectional analytical study from December 2020 to June 2021. Consenting obese or overweight subjects aged 21 years and above, were included. Subjects with documented cardiovascular disease/history of cardiovascular events were excluded. The sample was divided into two: obese/overweight subjects with periodontal disease and obese/overweight subjects without periodontal disease. Anthropometric characteristics, oral hygiene habits, medical history and periodontal examination findings were documented. Cardiovascular risk was calculated using the Framingham score. The chi-square test and Student test were used to evaluate the association between variables, with a significance level of 0.05. The odds ratio and its 95% confidence interval were used to determine the degree of association.

A total of 276 obese or overweight subjects were included (87.3% women). The average age was 49.2 ± 13.2 years. The prevalence of periodontal disease was 46.0% with gingivitis (23.2%), moderate periodontitis (13.8%) and mild periodontitis (8.3%) being the most frequent. Diabetes, body mass index (BMI) and age were significantly associated with periodontal disease (aOR: 3.24, 1.09, 1.05 respectively). The overall mean risk of developing a cardiovascular event within 10 years was 6.6% in subjects with periodontal disease and 2.2% in the healthy periodontium group ($p=0.0001$). This risk increased with severity of periodontal disease.

Obese or overweight subjects with periodontal disease have a greater risk of developing cardiovascular disease within 10 years than obese or overweight subjects without periodontal disease.

Keywords: obesity, cardiovascular risk, periodontal disease.

2nd International E-Conference on

DENTISTRY AND ORAL HEALTH

November 22, 2021 | Webinar

Biography:

Ama Moor Vicky Jocelyne is a medical doctor since 18 years, specialized in clinical pathology since 10 years and has received her Ph.D degree in the year 2018 from University of Yaounde 1 in Cameroon. She has working on dyslipidemia occurrence in Cameroon, with an interest in medicinal plants. She is associate Professor in the Department of Biochemistry at the Faculty of Medicine and Biomedical Science, the University of Yaounde 1. She has published more than 54 papers in reputed journals.