

**Review of Evgeniy Aleksandrovich Penkovoy dissertation for the degree of candidate of medical sciences .**

The relevance of the problem is determined by the assumption that the possible relationship between obesity and periodontitis lies in the common pathogenesis based on the inflammatory process. Modern studies show that obesity affects the state of oral tissues. Particularly periodontal disease, at the same time prospective studies show that periodontitis may be associated with cardiovascular disease. There is evidence that adipose tissue actively secretes various cytokines and hormones involved in inflammatory processes that share a pathophysiological basis with periodontitis. Obesity itself is a proven high risk factor for arterial hypertension, hyperlipidemia, associated clinical conditions, coronary heart disease and diabetes type 2 .

Hyperinsulinemia triggers a whole cascade of reactions leading to increased blood pressure: increases cardiac output and vasospasm; narrows the lumen of resistance vessels and increases total peripheral resistance; disruption of transmembrane ion-exchange mechanisms. This increases reabsorption of sodium in the kidneys and leads to the development of hypervolemia, increased  $\text{Na}^{++}$  and  $\text{Ca}^{++}$  in the vascular wall, contributes to vasoconstriction.

Also metabolic syndrome contributes to the manifestation and stabilization of arterial hypertension.

The possible causal relationship between obesity and periodontal disease, as well as potential underlying biological mechanisms, has not yet been determined.

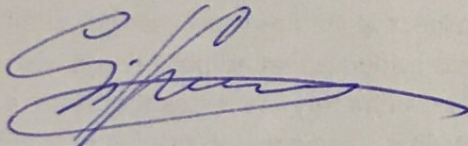
Clarification of the relationship between generalized periodontitis and general somatic disorders in obesity may be an important basis for the development of differential diagnostic criteria, methods of treatment and prevention of various forms of periodontitis. An integrated approach to the treatment of periodontitis and obesity will have a positive effect on the patient's health, improve control over the manifestation of the underlying disease and increase treatment efficacy.

In view of the above information, this dissertation study seems to be timely and relevant.

The author revealed the relationship between the degree of obesity and the severity of destructive changes in periodontal tissues. The revealed clinical peculiarities of the state of microcirculatory channel of periodontal tissues and bone tissue mineral density as the factors influencing the severity degree of chronic generalized periodontitis in obese patients are of the greatest value and novelty.

The researcher substantiated the expediency of systematic periodontal examination in obese patients before the development of severe forms of periodontitis and general somatic complications.

The results of the dissertation research of Evgeniy Aleksandrovich Penkovoy should be evaluated as a serious contribution to science and practice.



**Violetta Silfver, MD,**

**Senior Consultant Cardiologist**

**Head of Cardiology Inpatient Unit**

**Södertälje Hospital, Stockholm, Sweden**