

# Telomere length of the gums of patients with diabetes mellitus in non-alcoholic fatty liver disease

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It is known that all pathological conditions in the organs and tissues of the periodontium, especially on the background of metabolic diseases, are accompanied by a reduction in the vital activity of cells, an acceleration of the processes of their aging and death. ***Purpose:*** This study aimed to determine telomere length in patients with diabetes mellitus with NAFLD as a marker of chronic periodontitis.

## ***Methods:***

1-st group (26 patients with diabetes mellitus as a component of NAFLD)

2-nd group (10 apparently healthy patients)

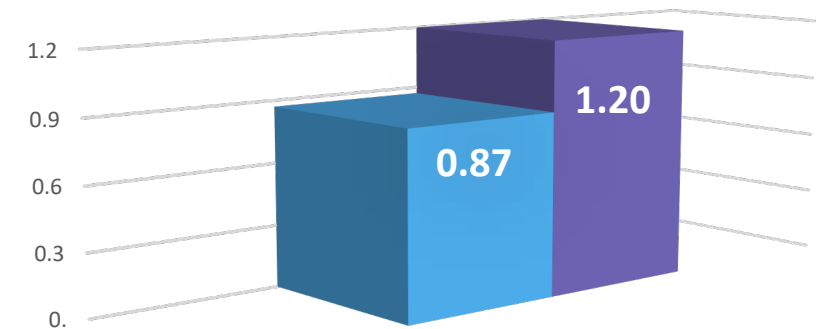
Periodontal status was determined in all patients. Material for studying telomere length was taken from the surface of the attached gum by scraping with subsequent use of the real-time polymerase chain reaction method.

**Figure 1. Study Design**

***Results and conclusions:*** Characteristically, 92.3% of patients with NAFLD had a chronic inflammatory process in the periodontium, when compared with controls. Also, this group had a shorter telomere length (0.87 relative units), when compared with the control group (1.2 relative units ( $p = 0.05$ )). Thus, in patients with diabetes mellitus on the background NAFLD initiates the aging process of periodontal cells, which is associated with low-intensity systemic inflammation in the body.

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■ 1-st gr.  
■ 2-nd gr.



**Figure 2. Difference in telomere length parameters between the main group and the control group**