BACKGROUND: The aim of this study was to evaluate the serum lipoxin A4 (LXA4) and neutrophil/lymphocyte (Ne/Ly) ratio in individuals with achieved systemic risk factors for periodontitis.

MATERIAL AND METHODS: One hundred and eighty volunteers (69 male, 111 female) who were categorized as systemically healthy control, diabetes, hyperlipidemia, obese and menopause were recruited for this cross-sectional study. Sociodemographic characteristics and oral health behaviors were recorded via questionnaire. Clinical periodontal parameters, including plaque index (PI), gingival index (GI), probing pocket depth (PD), clinical attachment level (CAL), sulcus bleeding index (SBI) and decayed, missing, and filled teeth index (DMFT), were assessed. Systemic parameters and LXA4 levels were evaluated in serum samples.

RESULTS: Clinical periodontal parameters and DMFT were higher in subjects with achieved systemic risk factors than in healthy subjects. The systemically healthy with periodontitis group had higher serum LXA4 levels than the systemically healthy with non-periodontitis group (P<0.05). The Ne/Ly ratio was higher in the hyperlipidemic group with periodontitis than in the hyperlipidemic group with non-periodontitis (P<0.05). In the control group, serum LXA4 levels were positively correlated with the PD, CAL and SBI.

CONCLUSIONS: In the presence of periodontitis, an increase in LXA4 levels and the Ne/Ly ratio in hyperlipidemic patients could contribute to the hypothesis that these parameters could be an indicator in periodontitis and its systemic risk factors.