Periodontitis, a chronic infection characterized by chronic inflammation in the tissues surrounding the teeth, is formed by a large number of pathogenic microflora. Inflammatory mediators such as C-reactive protein (CRP), interleukin-1β (IL-1β), tumor necrosis factor-α (TNF-α), interleukin-6 (IL-6) levels and products derived from oxidative damage increase in blood in individuals with periodontitis (1). It is known that periodontal disease, associated with hyperlipidemia, type 2 diabetes mellitus and cardiovascular disease, results in systemic inflammation, oxidative stress and endothelial dysfunction (2). Metabolic syndrome is a combination of obesity, hypertension, impaired glucose tolerance or diabetes, hyperinsulinemia, and dyslipidemia. In these systemic conditions increased serum levels of pro-inflammatory cytokine and products derived from oxidative damage are observed (3). Oxidative stress may act as a potential common link explaining relationships between each component of metabolic syndrome and periodontitis. The aim of the presentation was to evaluate the role of oxidative stress in bi-directional relationship between metabolic syndrome and periodontitis.