

ABSTRACT

Diabetes mellitus affects > 171 million people worldwide, with type II diabetes being the most prevalent, affecting 85-95% of the diabetic population(1). Unfortunately, despite conventional medical treatment, some diabetic patients do not seem to be able to reach desirable metabolic control. Numerous studies have shown a correlation between chronic inflammatory periodontal diseases and diabetes, in which both diseases influence the progression and response to treatment of the other(2-13). Importantly, studies have demonstrated that mechanical periodontal treatment can improve the level of metabolic control in patients with diabetes(14-17). However, it is still not clear which periodontal treatment approach would best benefit the metabolic control of diabetic patients or the mechanisms of how this occurs. It is our *hypothesis* that successful treatment of periodontal disease in type II diabetic patients will positively affect their metabolic and immunological control. Therefore, the aims of this study are 1) to determine the periodontal status of diabetic patients who do not respond well to medical treatment, 2) to evaluate whether medicated diabetic patients, with undesirable HbA1c levels and concomitant periodontal disease, will show improvement in periodontal status, glycemic control, and inflammatory responses following routine, non-surgical periodontal treatments, and 3) to determine which periodontal therapy best improves periodontal and metabolic control in this population. For these purposes, we will evaluate medicated adult type II diabetics that still present poor metabolic control for their periodontal status. Half of the patients that require periodontal treatment will be treated immediately and the other half will be treated after 6 months from initial screening. Treatment group will be subdivided into two groups: conventional periodontal therapy (scaling and root planing) and combination therapy (scaling and root planing followed by local antibiotic administration). Their periodontal parameters, glycemic control and inflammatory mediators will be assessed at baseline, 6 weeks, 3 months and 6 months post therapy.