ABSTRACT:

To evaluate the efficacy of 0.2% Curcumin (Curcuma Longa) strip as local drug delivery system in chronic periodontitis and to investigate the role of intrinsic antioxidants, superoxide dismutase enzyme in response to Curcumin strip as local drug delivery. Curcumin is the principal curcuminoid of the popular Indian spice turmeric, which is a member of the ginger family. Curcumin has proven properties like anti-inflammatory, antioxidant, antimicrobial, hepatoprotective, immunostimulant, antiseptic, antimitagenic, and it also accelerates wound healing. Antioxidants are groups of substances that are able to prevent the oxidation of substrate by these ROS, thereby offering protection. The superoxide dismutase activity significantly improved following periodontal therapy, suggesting a positive response to nonsurgical periodontal therapy. Therefore, treatment of periodontal disease reduces oxidative stress by a concomitant reduction in inflammatory load by enhancing antioxidant levels. So in this study, superoxide dismutase levels improved and also clinical parameters and PPD reduced following periodontal therapy. This study has positive outcome for particular antioxidant, elaborate studies are needed to prove the efficacy of curcumin strip in other antioxidants.

KEYWORDS: Chronic periodontitis, Non-surgical periodontal therapy, Curcumin, Superoxide dismutase, Local drug delivery.