

**“Antioxidant effect of Nigella Sativa mouthrinse on
periodontal disease -An in vivo study.”**

By

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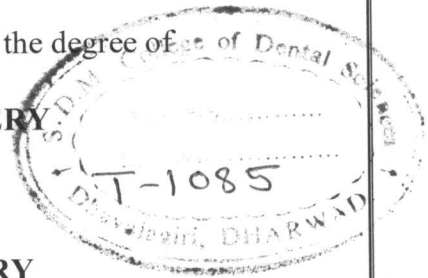
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ABSTRACT

Introduction- Various synthetic mouth rinses are available in the market which have side effects and have been unsuccessful in reducing oxidant levels. These oxidant levels (free radicals) cause tissue damage in periodontal disease. Thereby, an alternative is needed to reduce oxidant level and control tissue damage, with the help of a plant product "Nigella sativa" containing an antioxidant activity.

Objective- To assess the effect of Nigella sativa mouth rinse on total antioxidant levels in saliva, in gingivitis, periodontitis and healthy group.

Method- An interventional study was conducted on total 77 subjects. A group of 28 healthy, 27 gingivitis and 22 periodontitis subjects were selected and their salivary total antioxidant levels was measured. Nigella sativa mouth rinse was intervened for a month and their saliva levels were evaluated before and after 1 month of use of Nigella sativa mouth rinse.

Result- The total antioxidant level in healthy (baseline) was 0.350 $\mu\text{mol/l}$ and after 1 month is 0.420 $\mu\text{mol/l}$ which exhibited no statistical significant difference ($p=0.585$), in gingivitis (baseline) 0.229 $\mu\text{mol/l}$ and after 1 month is 0.286 $\mu\text{mol/l}$ which exhibited no statistical significant difference ($p=0.764$) and in periodontitis (baseline) was 0.688 $\mu\text{mol/l}$ and after 1 month is 0.364 $\mu\text{mol/l}$ which again showed no statistical significant difference ($p=0.072$).

Conclusion- The study showed no significant difference in total antioxidant levels from baseline to 1 month, in healthy and gingivitis and periodontitis groups on intervention of Nigella sativa mouth rinse containing antioxidant activity. But there is a trend showing increase in total antioxidant level with intervention of this particular agent. To confirm this, it requires another study with a longer duration.

Keywords- Total antioxidant levels, Nigella sativa, periodontal disease.