Effects of melatonin on antioxidant enzymes in ligature-induced periodontitis in rats liver

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Aim:

Purpose of this study was to evaluate the effect of melatonin on the activities of antioxidant enzymes in the liver tissue of ligature-induced periodontitis rats.

Material and Methods:

In the study twenty eight Wistar Albino male rats were used. The rats were divided into four
groups as follows: Healthy(S) saline solution(s), Smelatonin(m), Periodontitis(P) sand Pm. 3/0 silk ligature were placed at the gingival margin of the upper second molars in both mandibular quadrants. Rats in Sm and Pm groups began to receive 10 mg/kg per day, i.p., melatonin for 2 weeks. Following 2-weeks, all rats were anaesthetized and then were sacrificed. Liver samples were collected in order to determine levels of malondialdehyde (MDA), Superoxide dismutase (SOD), glutathione peroxidase (GSH-Px).

Results:

MDA levels were higher in P groups when compared with S groups. SOD and GSH-Px levels lower in Ps group compared to Pm group as well as MDA level lower in Pm group.

Conclusion:

Melatonin might caused a decrease in MDA levels and an increase in SOD and GSH-Px levels and might regulate the activities of antioxidant