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The Effects of Fresh and Commercial *Aloe Vera* Gel on IL6 Gene Expression in the Rabbits After Oral Mucosal Tissue Burning



BACKGROUND: *Aloe vera* is a vitamin and mineral-rich plant with numerous health and skin-care applications. **Aims of the study:** Is to determine how *Aloe vera* affects the IL-6 gene expression in an adult male New Zealand rabbit.

Material and methods: In this experiment, 48 male New Zealand rabbits were used. In each rabbit, ketamine and xylazine were administered intramuscular into the thigh muscle. In less than 5 minutes, an appropriate level of anesthesia was established. In the operating room, animals were placed on the operating table. For unipolar cauterization, electrosurgical generator cautery was used throughout the procedure. We burned 0.5 cm of the rabbits' buccal oral mucosa with a unipolar electrocautery pen with a (2.5) inch standard blade electrode at 95.5 C°. After that, the rabbits were placed into four groups, each with 12 rabbits: Group 1 (normal oral mucosa without burning), Group 2 (burning oral mucosa without medicine), Group 3 (*Aloe vera* plant/fresh gel), and Group 4 (*Aloe vera* /commercial gel). Each group's animals were euthanized on days (3), (7), and (14) of the trial, resulting in a total of 12 rabbits slaughtered during each medication period. The IL6 gene expression in tissue was determined using Polymerase Chain Reaction (PCR). **Result:** The untreated burn site had the greatest amount of IL-6 gene expression throughout the experiment, while the burn site treated with *Aloe vera* gel had the lowest level of IL-6 gene expression. **Conclusion:** Fresh *Aloe vera* gel and commercial *Aloe vera* gel are thought to have a significant anti-inflammatory impact by lowering the amount of inflammatory mediator (IL-6) and so promoting wound healing