PP-337 [Apitherapy]
Comparative Study Of Wound Healing Properties Of Apis Totale In Rats

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Honeybees produce important bee products that are beneficial for human and animal health. In addition to these products that can be consumed for human and animal health, it is also possible to utilize them after the natural death of the honeybee. This product, called “apis totale” (podmore), is prepared with dead bees collected in hives in the fall or spring. Podmore contains bee venom, pollen, nectar, bee bread, royal jelly and chitin, naturally. Podmore extract traditionally uses apitherapy for wound treatment, radiation protection, nerve healing, obesity and general support. This study aimed to compare podmore extract with propolis extract and silver sulfadiazine in the treatment of surgically sterilized wounds on the back skin of rats. Within the scope of the study, the healing level of the back skin was followed and histological analysis was performed. In the study, chemical analysis, amino acid analysis, wound healing and antioxidant activity level of podmore extract and phenolic compound analysis of propolis extract were performed. As a result, it was revealed that podmore extract had positive effects on wound healing in rat back skin. When histopathologic findings were examined, it was observed that podmore and propolis groups were more effective than silver sulfadiazine and had similar histopathologic appearance. It was found that epithelial integrity was successfully completed in the podmore group, however, in the propolis group, protection in terms of hair follicles and sebaceous glands was at the highest level. Among the experimental groups, the lowest healing was found in the control group and the epidermis thickness was thinner than all groups. Our study is a pioneering study for content analysis of podmore extract and investigation of its activity in biological processes besides of using facilities this up-cycle bee product.