

The use of Bingol honey in infected wound treatment in a cat*

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Abstract:*In this study; It was aimed to report the results of the treatment of large infected wound (starting from right articulatio cubitis, continuing along radius-ulna and ending in articulatio carpi) with Bingol honey in a 4 month old male cat brought to Bingol University Veterinary Faculty Surgery Clinic. Disinfection was performed by shaving the hairs around the infected wound of the cat under general anesthesia. The necrosis areas in the area were cleared. Honey was applied to the sterile hydrophilic gauze as a thin layer and applied as a dressing on the infected wound. Honey dressing was changed every two days. No topical or systemic antibiotics were administered to the cat during this period. During honey dressing applications, it was determined that inflammation and infection decreased day by day, new tissues formed during removal of dressing and the wound closed. no granulation tissue occurred. Due to the antibacterial, anti-inflammatory and antioxidant properties of honey, the infected wound was completely healed within a month. Due to the antibacterial properties of honey, it can be safely used in infections caused by antibiotic resistant pathogenic bacteria and wound treatment in organic livestock production. Bingol honey was rapidly reduce infection, inflammation, odour (sloughing of necrotic tissue), swelling and pain. It was promote granulation (without abnormal granulation tissue) and epithelialization, and provides a rapid healing. It has been concluded that flower honey produced in Bingol province which has rich endemic plant flora gave excellent results in wound treatment.*

Keywords–Bingol,honey, wound, infection, treatment.

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I. Introduction

It is reported to be effective in wound treatment of honey because of Antibacterial, anti-inflammatory and antioxidant properties¹⁻³.The antibacterial activity of honey depends on its osmotic effect, acidity, hydrogen peroxide and phytochemical factors⁴. The anti-inflammatory effect of honey reduces the damage caused by free radicals arising from inflammation and prevents further progression of necrosis⁵. Antioxidant activity of honey originate from phenolic compounds. Antioxidants help protect against cell damage caused by free radicals. Antioxidant compounds are effective in preventing cancer, cardiovascular diseases, inflammatory disorders, neurological degeneration, wound healing⁶.

In this case report; It was aimed to report the results of the treatment of large infected wound (starting from right articulatio cubitis, continuing along radius-ulna and ending in articulatio carpi) with Bingol Honey in a 4 month old male cat brought to Bingöl University Veterinary Faculty Surgery Clinic.

II. Case Report and Discussion

It was determined large infected wound (starting from right articulatio cubitis, continuing along radius-ulna and ending in articulatio carpi) in a 4 month old male cat brought to Bingol University Veterinary Faculty Surgery Clinic (Figure 1).

Disinfection was performed by shaving the hairs around the infected wound of the cat under general anesthesia. The necrosis areas in the area were cleared. Honey was applied to the sterile hydrophilic gauze as a thin layer and applied as a dressing on the infected wound (Figure 2A,B) . Honey dressing was changed every two days.The change of dressing was easily performed without pain. No topical or systemic antibiotics were administered to the cat during this period. it was determined that reduced inflammation, odour (sloughing of necrotic tissue) and infection as from 3. day during honey dressing applications. Approximately 2 weeks later the wound was observed that it decreased by 50% (Figure 3). It was observed that wound closed rapidly later 21. day and full healing was occurred on 30. Day (Figure 4).No abnormal granulation tissue occurred. Due to the antibacterial, anti-inflammatory and antioxidant properties of honey, the infected wound was completely healed within a month.



Figure 1: Appearance of large infected wound (starting from right articulatio cubitis, continuing along radius-ulna and ending in articulatio carpi)in a cat.



Figure 2: Application of Bingol honey on sterile hydrophilic gauze (A) and view of dressing(B).



Figure 3: Healing process of the wound (3.day-13.day).



Figure 4: Healing process of the wound (19.day-30. day).

It was reported that Honey has been used to treat wound and burns. Honey reduces inflammation, debrides necrotic tissue, edema and promotes angiogenesis, granulation and epithelialization^{1,3,7-9}. Honey provides to the developing tissues, the nutrients like amino acids, vitamins, minerals, and enzymes¹⁰. Further, honey supplies nutrients to the cells by drawing serum out through the tissue by osmosis induced by its high sugar content. Another benefit is that it serves to reduce swelling in the surrounding inflamed tissue, and thus reduces a major cause of pain. It also create a film of liquid between the tissues and the dressing, which permits the dressing to be removed without pain and prevents the damage of the recently regrown cells^{8,11}. We were observed similar findings in this case.

III. Conclusion

As a result; Due to the antibacterial properties of honey, it can be safely used in infections caused by antibiotic resistant pathogenic bacteria and wound treatment in organic livestock production.

Bingol honey was rapidly reduce infection, inflammation, odour (sloughing of necrotic tissue), swelling and pain. It was promote granulation (without abnormal granulation tissue) and epithelialization, and provides a rapid healing.

It has been concluded that flower honey produced in Bingol province which has rich endemic plant flora gave excellent results in wound treatment.

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