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Case report

A Case Report on Wound Healing Activity of Cow Ghee

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Abstract

Cow ghee, the butter fat obtained from the cow's milk has been claimed to have many medicinal properties like it is cooling in energy, rejuvenating, bestows luster and beauty, enhances memory and stamina, increases the intellect, promotes longevity, is an aphrodisiac and protects the body from various diseases. Also it was reported for wound healing property in mice and rats. The present study was an attempt to explore the use of cow ghee for veterinary purpose with regard to wound healing activity. The subject in this study, a buffalo suffered the deep skin injury because of rubbing against the rock in the pond. Treatment of the injury was commenced and continued with the traditional herbs to modern methods including antibiotic ointment but it failed. First treatment included the curcumin extract while the second treatment comprises Nomax cream. Modern antibiotics forms the Third and fourth treatment. These treatments failed due to the habit of the animal to visit the pond frequently thereby diminishing the effect of medicines, if any. It was followed by a cream containing cow ghee in a conventional cream base which showed very good results for the wound healing in buffalo.

Keywords: Wound Healing, Cow Ghee, Veterinary case

Introduction:

Cow ghee, the butter fat obtained from the cow's milk has been claimed to have many medicinal properties like it is cooling in energy, rejuvenating, bestows luster and beauty, enhances memory and stamina, increases the intellect, promotes longevity, is an aphrodisiac and protects the body from various diseases.(1)

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In recent work cow's ghee has been seen to exhibit excellent wound healing property.(2) It also potentiates antimicrobial activity of the antibiotics.(3) Ghrita, the preparation of cow's ghee with herbal drugs has promising immunostimulant, antioxidant and hepatoprotective activity.(4) Another formulation containing cow's ghee and brahmi known as Brahmi ghrita exerts substantial memory enhancing, CNS depressant and anticonvulsant activity.(5,6) It is possible that this activity is because of its ability to penetrate blood brain barrier and also to facilitate building or supporting the biochemical activities of tissues such as neurons. The fatty acids in the ghee may induce such activity.

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According to General Guidelines for the methodologies on Research and Evaluation of Traditional Medicine published by WHO, although observational studies involving large number of patients may be a valuable tool for the evaluation of herbal medicine; but the treatment, diagnosis of illness is often based on the specific needs of the individual patient.(7) Therefore, single case studies for the efficacy of a herbal medicine should not be ignored. And this has been given emphasis in this particular document of WHO.

Through this article, we wish to report a case in which a severe wound on the back of a domesticated buffalo which failed to respond to a prolonged conventional antibiotic treatment responded very fast to a treatment with a formulation containing cow's ghee.

Methodology:

Background: The case subject

An aged (15 years) domesticated buffalo suffered the deep skin injury because of rubbing against the rock in the pond. Injury was treated with conventional antibiotic ointment but failed to respond to the treatment, presumably because of the habit of the buffalo to sit in the pond. Treatment continued for a period of about three months, but the wound became worst. The prognosis at this stage was worst when the treatment with cream containing cow ghee was started.

Prior to the treatment with the cow's ghee cream, the buffalo received following treatments:

I. The paste of curcumin was applied for 4 days due to which the wound appeared to reduce in size, however, the wound soon started increasing in size and was infected heavily.

II. Nomax antiseptic cream was applied regularly for 4 days. Despite initial favourable response the infection reappeared.

III. Following treatment was given:
1. Inj. Megamycin - twice a day (Clarithromycin from Mega Pharmaceuticals Pvt. Ltd)
2. Bolus lixen - twice a day (Cephalexin from Glaxo Smithkline Pharmaceuticals)
3. Terramycin 500 - twice a day (Oxytetracyclin from Pfizer Ltd.)
4. Himax cream - (Herbal extract of Arjuna bark from HVS animal health)

Treatment was continued for 4 days without any substantial result.

IV. Following treatment was given:
1. Inj. Dicrystin - twice a day (Procaine PenicillinG and Penicillin G Sod. From Sarabhai Zydus Animal Health Ltd.)
2. Bolus T. R. P. - twice a day (Zinc Sulphate, Bromelain, DL- methionine, L-lysine HCl, arginine, D- biotin, Vit. A, aloe vera from Dosch Pharmaceutical Pvt. Ltd.)
3. Topicure spray - (Sarala, Tailaparna, Devadaru from Natural remedy)

There was some relief during initial three days but thereafter the infection flared up and the wound expanded in size.

V. Treatment with cow's ghee cream:

Formulation:

Cow's Ghee	10.00%
Tea Tree Oil	1.00%
Stearic Acid	6.00%
Ethylene Glycol Monostearate	3.00%
Cetyl Alcohol	3.00%
Triethanolamine	1.00%
Glycerine	10.00%
Preservative	0.2%
Water	q.s.

This formulation was selected on the basis of several preliminary experiments and trials. The cream was prepared by conventional method.

The prepared cream was applied to the wound with a cotton swab and the wound left open without application of dressing of any sort.

Result:

Plate I shows the condition of the wound prior to the treatment with cream containing cow's ghee. About 50% relief was seen after six days of application of cream. The area of wound was reduced to a considerable extent. Complete healing of the wound was observed after the treatment with cream for about a month. Plate II displays the wound after 10 days of treatment with cream containing cow's ghee.

Plate I: BEFORE TREATMENT – FRESH WOUND

Plate II: AFTER 10 DAYS TREATMENT – WOUND HEALED

Discussion:

It seems worthwhile noting that the wound which did not respond to variable treatment that ranges from simple herbal preparation like turmeric to modern medicine i.e. antibiotics responded very well to the treatment of formulation containing cow's ghee. Cow's ghee has been reported to exert significant wound healing activity. Its antifungal activity has also been shown to be independent of any antibiotic or antifungal agent, which may be included into the formulation. In the present case all antibiotics were discontinued and the formulation contained only cow's ghee as an active component.

Cow's ghee has been reported to exhibit antiulcer activity and also effective against infection in the eyes. Ghee contains several saturated and unsaturated fatty acids which are capable of taking part in metabolic processes involved in healing of any wound. It seems therefore worthwhile that the cow's ghee is explored further as an effective clinical agent.

References:

1. Chunekar KC. Bhav Prakasa Nighantu (Hindi translation). Chaukhambha Publications, Varanasi, 1960.
2. 2. Charde MS, Fulzele SV, Satturwar PM, Joshi SB, Kasture AV. Wound healing and anti-inflammatory potential of madhu ghrita. Indian J Pharm Sci, January, 2006; 68(1): 26-31
3. 3. Prasad V, Dorle AK. Evaluation of ghee based formulation for wound healing activity. J Ethnopharmacology, January, 2006; 107(1): 38-47
4. Fulzele SV, Bhurchandi PM, Kanoje VM, Joshi SB, Dorle AK. Immunostimulant activity of Ashthamangal Ghrita in Rats. Ind J Pharmacol, June, 2002; 34: 194-197

5. Achliya GS, Wadodkar SG, Dorle AK. Evaluation of CNS activity of Brahmi Ghrita.Ind J Pharamcol, February, 2005; 37(1): 33-36
6. Achliya GS, Wadodkar SG, Dorle AK. Evaluation of Sedative and Anticonvulsant activities of Unmadnashak Ghrita. J. Ethno-pharmacology, January, 2004; 94 (1): 77-83
7. General Guidelines for the methodologies on Research and Evaluation of Traditional Medicine, WHO 2000; 7

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