

Evaluation of wound healing activity of *Nigella sativa* seed powder on Wistar albino rats

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Abstract

Wound healing requires special treatment and care. In the allopathic medical system wound healing, both surgical as well as non-surgical, has proved to be challenging. Due to the emergence of multi-resistant organisms, wound care professionals have revisited the ancient healing methods in order to use traditional and alternative medicine in wound management. Several herbs used to promote the wound healing have not yet been scientifically studied. *Nigella sativa* (black-caraway, also known as nigella or *kalonji*), often called black cumin, is an annual flowering plant in the family of Ranunculaceae. The aim of this study was to identify the effectiveness of *Nigella sativa* seed powder in wound healing activity in an animal model. It is an experimental study on healthy Wistar albino rats. The animals were divided into 3 groups. The animals of group A were left untreated and considered as control. Group B served as standard and received Amoxicillin. Group C was considered as test and treated with prepared test drug. Powder of test drug and standard drug were topically applied 500mg every alternative day and bandaged starting from the day of operation, till complete epithelialization up to 14 days. The direct observation of wound size, exudates type and amount, edges, necrotic tissue type and skin colouration of surrounding wound records were converted into Bates-Jensen Wound assessment Tool. Control group showed continuing recovery due to physiological healing during the experiment up to 14 days. The test and standard groups showed considerably minimum duration for complete wound healing. The duration for complete wound healing of the standard drug was observed to be 10 days whereas in test drug, it was only 8 days. It shows that the test drug has faster recovery rate than the standard drug. This obviously suggests that *Nigella sativa* seed powder is effective on wound healing.

Keywords: *Nigella sativa*, wound healing, experimental model

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