

Natural Remedies And Modern Techniques In Wound Treatment

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Abstract- To know of the impact of modern techniques and natural herbs in the treatment of wounds, By treating rats' wounds with laser and Nigella sativa oil, Note the ability of each to heal the wounds and speed of response.

duration of the inflammatory phase was condensed by proceedings with Nigella sativa oil and laser. However, laser existed extra active Natural oil compared, and the results were more significant.

stimulation of collagen formation and synthesis increase in the number of fibroblasts indicated of each treatment observed in the prevalence proliferation level.

Technical treatment has proven to be more effective than physical therapy cutting-edge from initial periods wounding remedial, because laser preceded Nigella sativa oil in the proliferation and maturation stages.

Keywords: *natural remedies, wound treatment, modern techniques, laser , nigella sativa oil.*

I. INTRODUCTION

We want to know the impact of modern technologies and natural herbs on wound healing, so we did that by comparing Nigella sativa oil and laser after we looked at many studies dealing with methods used to accelerate wound healing (1,2).

It was also mentioned in history that the black seed is one of the ancient Egyptian remedies since the era of the pharaohs, and it is known in prophetic medicine(3,4).

black seed oil has antioxidant activity, which has occasioned appearing in decrease amount of inflammatory injuries, thus reducing or ending the development of inflammation in acne patients.(5)

Another study reported that black seed oil has a attention independent on reserve Gram-positive plus Gram-negative bacteria [6]. Recently, Has Reported Reports The primary extract of Black seed elicits an effect capable of resisting many antibiotic-resistant bacteria, inclusive Positive and Gram-negative Gram (7).

Black seed has anti-inflammatory and analgesic effect, and this effect has been Adopted in the experiments carried out on laboratory animals(8,9)

In the previous study, the soothing oil lotion, which was a grace pill, was very effective in reducing the rate of healing of recurrent aphthous ulceration, and a complete cure was obtained after 8 days of treatment.(10,11)

The use of low levels of lasers to reduction ache ,Skin edemas Wound inflammations, stimulate injury, tissue then deep nerve remedial, and avoid soft tissue harm takes remained recognized nearly Decades ever from the time when the contrivance of the laser.(12,13)

The treatment strategies adopted the exposure time, intensity, and wavelength laser type(14)

Researchers pointed an activity of HeNe laser in the healing of wounds.(15,16)

II. MATERIALS AND METHODS

By using 45 healthfully male ratsanimals, all 250 ± 50 gm. Similar environmental conditions with all the animals, where they were to maintain the standard of clean water and food for rats .

Were gotten ratsanimals animal house, which at the Baghdad University College of Medicine

When we made a regular wound of about one Centimeter in the thigh of the anesthetized animal, randomly divided the animals into three sections. Animals treated with Nigella sativa oil were included in the first section and the second section in the laser and control in the third section. For the initial experiments used five animals a histopathological assessment was performed Off firstly, third, fifth and seventh days after surgery.

Group (1): consists of (15) animals. The animal's incision was subjected to a daily laser.

Group (2): It consists of (15) animals. The incision to wound the animals was to apply sativa seed oil administered topically twice every day .

Third Grouping: 15 ratsanimals are regard as a controller.

A histopathology analysis be there operated to assess the quantity cells inflammation, then fibroblasts appearance microscopic, granulomas, so all epithelial cells in sample.

Laser device

Helium neon laser (US.BAT. 4311989) Continuous of wavelength 632.8 nanometer was work. Its output power is 0.85 mW and, a ray point of 0.125 cm^2 area at 120 second and Energy density 0.102 J/cm^2 .

III. RESULT

In the current study, histopathological examination found that the inflammatory reaction in the laser-treated incisions was less prominent than control wounds that appeared with elevated inflammatory cell infiltration.

It was evident in the present work that a decrease in the level of laser radiation reduces the inflammatory reaction in the wound area. The results confirm that the Helium neon laser (632.8 nm) then Nigella sativa oil accelerate wound healing.

In general, fibroblasts are known to be essential within restorative of soft tissue injuries as well as operative wounding. Epithelial then granular tissue creation at phase of repair; Fibroblasts begin to manufacture collagen

Laser treated wounds compared to the controller grouping indicated advanced amounts of fibroblasts. Likelihood that HeNe laser will cause fibroblasts to proliferate during the therapy reaction.

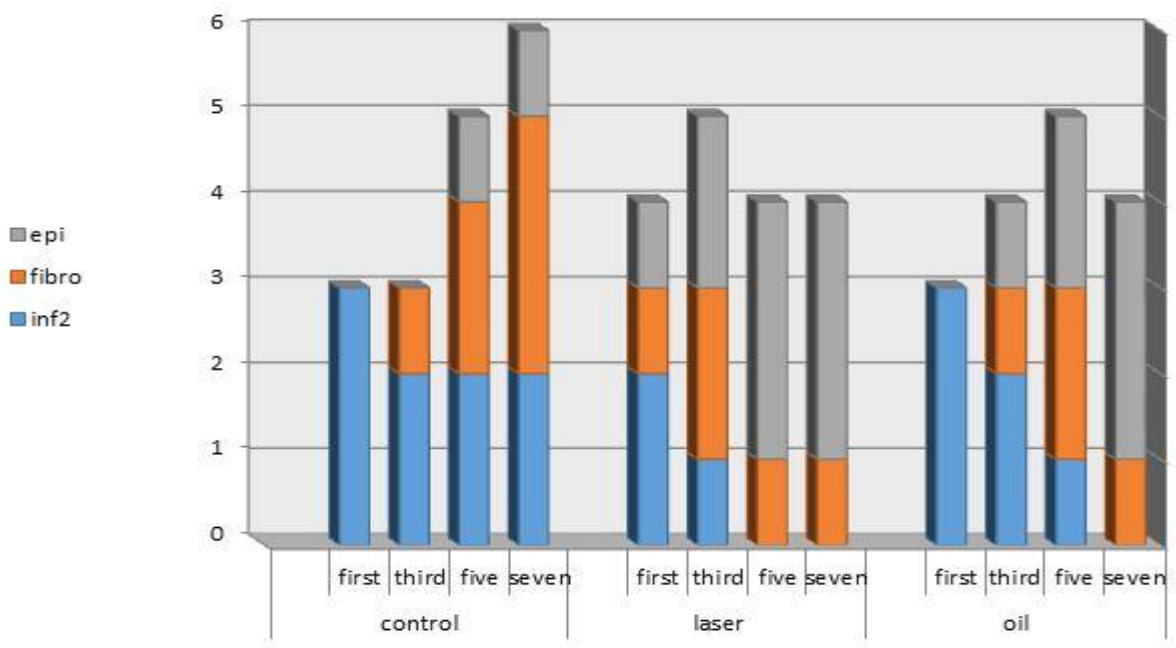
An effectiveness of laser fibroblast stimulus on wounding restoration is through the repairs of excessive mitotic action fibroblasts in the subsequent remedial duration.

Sections microscopy revealed that the laser stimulates the fibroblasts to accumulate collagen fibers much more than controller grouping, and have being a marked enhance the production fibroblasts and epithelial cell proliferation after laser stimulation,

Overall, it was evident that all samples of the laser groups exhibited a greater number of fibroblasts and rise collagen synthesis When we compare it with the controller grouping presented investigate. LLLT also stimulates the natural healing power of cells in the body.

Figures

Fig(1) Wound healing changes after treatment by laser and local application of Nigella sativa oil with control of the first, third, fifth and seventh days



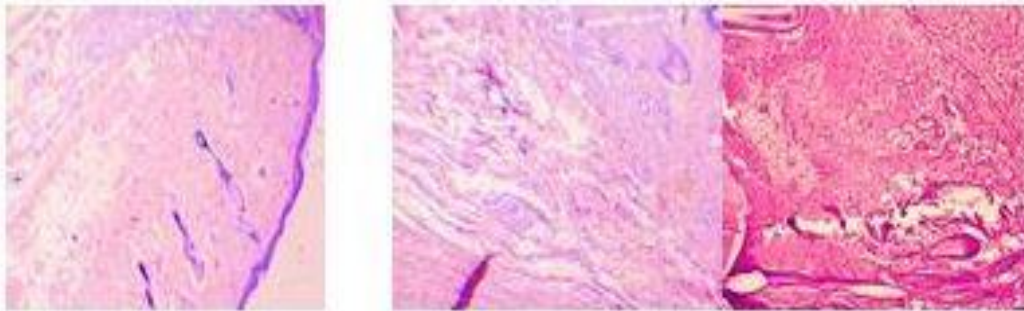


fig (2):1- Healing of irradiated wound by He -Ne laser three days post operatively, moderate of granulation tissue are observed with epithelization. 2-three days post operatively with application by Nigella sativa oil, show moderate inflammatory cells and mild of fibroblasts plus began the eepithelization. 3-3 days post operatively of control group, there is moderate amount of inflammatory cells infiltration with mild of fibroblasts and granulation tissue.

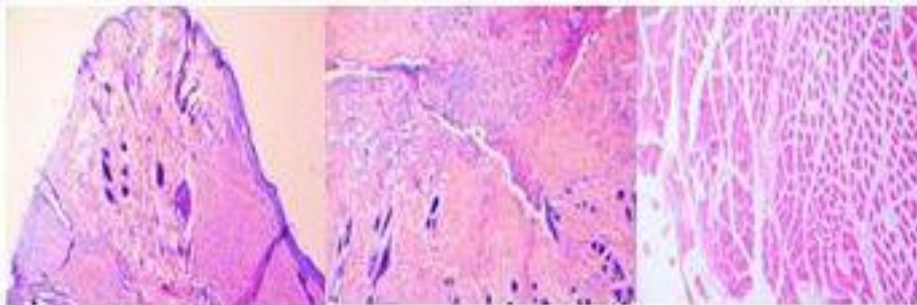


fig (3):1- Wound healing irradiated by He -Ne laser is complete five days post operatively which is characterized by epidermis formation at the site of the incision. 2- The five days post operation of wound by Nigella sativa oil describes by moderate fibroblasts and epithelization plus mild inflammatory cells. 3- The line of incision of control group five day posts operatively indicates moderate inflammatory cells and fibroblast proliferation. Plus an initial appearance of the epithelization.

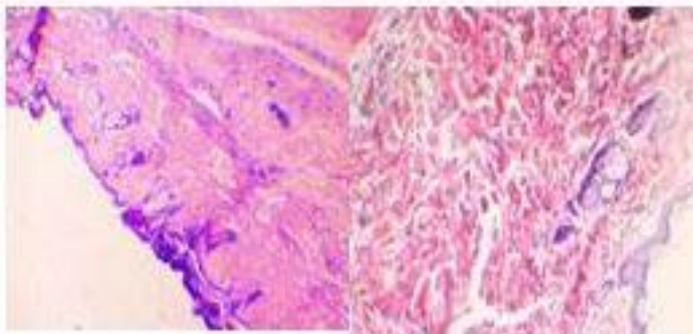


fig (4):1- Wound healing by Nigella sativa oil is complete seven days post operatively, cellular fibrous connective tissues are observed. 2- Shows line of incision seven days post operatively of control group, show hyperplasia of the epithelial cells with round and thick rete ridges.

IV. DISCUSSION

Although wounding remedy is not a clinical problem, we have not found a job or research that has an effect similar to black seed oil and laser therapy to speed up wounding remedial.

The target from analysis to make a comparison between the healing properties of injuries associated with modern techniques of wound healing stimuli and known natural herbs.

Nigella sativa is as effective and potent as any expensive treatment which may make this treatment better than standard medications in terms of cost effectiveness efficacy and criteria for side effects.

This treatment is not very expensive and the oil formulations can be obtained easily until evaluate the efficiency of black seed oil into a topical remedy of wounds.

These seeds have had such great success as a food additive that this ancient oil used in Iraq, the Middle East and Europe is truly a treat for everyone. In Germany the oil has been available for a while in capsule form in health stores (17).

Plants are available and grown in Iraq. Cooperation should be made to encourage farmers to grow these plants.

No other side effects were reported during the study requiring treatment discontinuation, so a detailed study of the pharmacodynamics of *Nigella sativa* oil should be undertaken, including how this treatment works.

(18,19) Studies and analyzes are conducted on the possibility of using *Nigella sativa* oil as a medicine or treatment in skin diseases.

Wounding remedial is unique of the most important applications of lasers in the medical field (20, 21). The objective from this examination be there find out dynamic results on the speed of laser skin tissue healing.

The use of laser technology in medicine has reached a great extent during the past decades. Due to the diversity of the biological effect, through choice of wavelength, power output, time and pattern illumination, lasers have found their way into many clinical specialties. (22, 23)

There are those who report that low laser influences several sides of the remedial procedure involving reducing inflammation leading to faster epithelial formation which culminates in better skin formation and enhanced collagen synthesis(24,25).

Rapid wound cleansing was achieved through the simultaneous growth of granulation tissue and epithelial formation.

Low-power laser radiation favorably accelerates relaxing cells relatively grow rapidly proliferating cells.

Success of modern techniques using natural herbal oils to accelerate healing wounds Study the focus of research, but laser is the best according to the consequences of the experiment.

Conclusion

Based on a results of this analysis know how to concluded that: -

It is the first study to determine the effectiveness of oil *nigella* compared to technology such as laser treatments, Though both methods are successful in speeding up the healing of wounds, it seems that the laser is the most effective in the early stages of healing.

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