

The Beneficial Effects of Green Tea Extract and its Main Derivatives in Repairing Skin Burns of Rabbit

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Abstract: This research was carried out to evaluate the potential and beneficial effect of green tea (*Camellia sinensis*) and its fractions in direct fire burns in comparison with antibiotic manufactured for this purpose using basic morphological and histological methods. Twenty-five animals were divided into five groups (5 animals each). These groups were control untreated group; crude extraction treated group, polyphenol fraction group, terpenes extract group and antibiotic ointment treated group. All types of treatments reduce the wounds to minimum volume at the beginning of the fifth week. Most wounds were recovered completely, giving normal epidermis, dermis and hair growing, whoever some burns showed no hair growth and gave abnormal appearance of newly formed skin. Furthermore, histological findings revealed normal cutaneous architecture of the extract treated wounds more than that appeared in the untreated wounds. The healing capability of *Camellia sinensis* was evident when compared to the impaired healing process of the wounds administered to the Baneocin antibiotic ointment treated rabbits that illustrated a delay in coagulation and inflammation phase of healing after five weeks of wounding. However, the healing effect of crude extract was more effective than that observed with the Baneocin treated or essential oil derivatives (terpenes and polyphenoles), respectively. The contract ability and closure times of wounds were very high by application of crude extract and antibiotic than those through application of terpenes and polyphenoles. Terpenes gave another way of treatment, it was good antimicrobial material and so did polyphenoles. They prevent microbial growing above the wounds after the first hours of application.

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