SAFETY AND EFFICACY OF PISTACIA LENTISCUS FRUIT’S FATTY OIL IN HEALING EXPERIMENTAL BURNS IN RABBITS (P139)

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The aim of this study was to assess the effect of Pistacia lentiscus fatty oil (PLFO) on healing process and its safety to the skin and mucous membranes in the rabbit model. The oil was extracted traditionally from black fruits collected from Skikda region. The cicatrizing activity was evaluated in 6 male New Zealand rabbits; 4 equal burns were realized on the back of each animal. The wounds treated with oil were compared to these treated in Vaseline, Madecassol® and untreated wounds. PLFO has shown promising healing properties by reducing the inflammatory phase, stimulation of wound contraction and reducing the epithelization period compared to the different controls.

Regarding possible adverse effects of PLFO, some toxicological tests were undertaken according to standard protocols. The test of the Eye irritation / corrosion and the dermal irritation/corrosion showed that this oil is only slightly irritating to the eye and to the skin, either intact or abraded after a single dose.

The repeated dermal toxicity test showed that PLFO produced a slight erythema after the second week of application. The erythematic index is growing and regressing alternately until the end of the experiment. One third of rabbits had presented a phenomenon of local sensitization with skin thickening. This phenomenon had been perfectly reversible and the skin has found its normal texture in a few days after cessation of oil application.

Regarding repeated toxicity via rectal route, PLFO was well tolerated. No anatomical or functional disturbance was observed in biochemical analysis, pathological examinations and histology.

The study concludes that Pistacia lentiscus fatty oil is effective for healing burns. It is tolerable in the short term, but may cause skin sensitization after prolonged use.

References: