



Original Paper

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A pilot study on wound healing using an antibacterial steroidal saponin

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ABSTRACT

Cost effective primary and secondary wound care is needed and have significant importance in current medicine. The steroidal saponin Flabelliferin B with a UV active binder attached (F_B), isolated from palmyrah (*Borassus flabellifer* L.) has a known structure and proven antibacterial activity. The objectives of the study were to (i) study the effects of F_B on male Wistar rats in relation to toxicity by wound healing (ii) study the toxicity of F_B by the eye tests on rats and rabbits (iii) test the allergic reactions by topical application of F_B on healthy human skin by the "patch test" (iv) evaluate the feasibility of full scale clinical trial of the F_B on infected wounds of humans. Toxic or other adverse effects on animals were not observed. Allergic reactions were also not observed on normal healthy human skin by the patch test. Having obtained ethical approval a prospective clinical trial was carried out in Colombo South Teaching Hospital. An ointment of 2% F_B was tested on wounds and ulcers with no subcutaneous tissue involvements. Human volunteers (n = 14) were employed in this study. Wound healing rates after treatment of F_B ointment were monitored by measuring the percentage decline in wound area with time using normal standard hospital treatment as control. Microbiological tests by swabbing were carried throughout these experiments. The rate of wound healing was not significantly different from current hospital treatment (p = 0.512) and no allergic or other adverse symptoms were shown. It is concluded that it may be possible to use F_B in treatment of wounds and ulcers with no subcutaneous involvement.

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