

Wound healing activity of *Crinum zeylanicum* L. (Amaryllidaceae)

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Abstract

Crinum zeylanicum is a medicinal plant used in Western part of Nigeria for management of skin trouble, injuries and on refractory ulcers. The aim of the current study was to evaluate its wound healing effect in Wistar rats using excision wound model. Acute dermal toxicity of the methanolic extract of *Crinum zeylanicum* was evaluated in rats using acute toxic class method described in OECD 404 guideline. *Crinum zeylanicum* methanolic bulb extract formulated into 1%, 5% and 10% ointment was tested for pro-wound healing activity. Excision wound measuring about 200 mm² was created on 25 male Wistar rats randomly divided into 5 groups of 6 rats each. The ointment was applied topically on the wounded area for 7 consecutive days, measured at 3 days intervals for 21 days. The acute dermal toxic dose (LD₅₀) was greater than 2000 mg/kg body weight. Topical application of *Crinum zeylanicum* based- ointment significantly (P<0.01) increased rate of wound retraction and reduced the epithelialization period from 21.75 days in control to 20.40, 17.60 and 14.4 days at 1%, 5% and 10% concentration respectively. These results strongly suggest that *Crinum zeylanicum*-based ointment accelerated wound healing process and may therefore be developed as a safe and effective herbal-based cream for management of wounds, ulceration and bruises

Keywords: Wounds; *Crinum zeylanicum*; Formulation; Topical

Introduction

The use of herbal medicines for management of various ailments is increasingly being accepted by general populations in both eastern and western countries as medicines and dietary supplements, along with modern chemotherapeutic agents (Agrahari et al, 2010). This is because of general acceptability that phyto-based health products have fewer side effects.