

Wound healing activity of ethanolic fruit extracts of *Carissa carandas* Linn

Chanchal Kumar Mishra

M.Ph PhD, BIT Mesra, INDIA

Abstract

Background: *Carissa carandas* Linn (F. Apocynaceae) is a climbing shrub, usually growing to 10 or 15 feet (3-5 m) high. In Jharkhand and other state of India commonly known as 'Karunda' or 'Jasmin flower Carissa'. It grows from sea level to 6000 feet and requirement is full exposure to sun. *Carissa carandas* may bloom and fruit off throughout the year. **Objectives:** To formulate the gel of fruit extracts of *Carissa carandas* and to determine its wound healing by topical application of gel on surgically induced wounds in Wistar rat. **Materials and Methods:** To study the wound healing activities, excision and incision studies, histopathology and Phytochemical studies were done. Ethanolic fruit extracts of *Carissa carandas* was applied topically as 20% w/w gel. Percentage of wound contraction and tensile strength was determined in excision and incision wound healing respectively. **Results:** The ethanolic fruit extracts of *Carissa carandas* (10% and 20% w/w) showed effective activity as compared to the simple ointment and untreated group. ERCC 20% w/w have better affect with respect to 10% w/w. There was increase in rate of contraction of wounds on 18th post wounding days ($3.04 \pm 0.55^{***}$), tensile strength ($388.31 \pm 0.59^{***}$). Histopathology of regenerated skin of EFCC showed enhanced production of collagen, mononuclear cells and fibroblasts.

Conclusion

The Ethanolic fruit extracts of *Carissa Carandas* (ERCC) ointments (20% w/w) showed significant increase in wound healing activity validating its use by the tribal people.

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***Corresponding author:** Chanchal Kumar Mishra, M.Ph PhD, BIT Mesra, INDIA; Email: chanchal.mishra8@gmail.com

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