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***In vivo* wound healing activity of *Cajanus cajan* on burn wound model in mice by regulating antioxidant and inflammatory mediators**

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The leaves of *Cajanus cajan* has been traditionally used by Indian village people in wound healing, jaundice, hypocholesterolemia and inflammation. The phytoconstituents of *C. cajan* includes flavonoids and stilbenes. Wound healing is a complex process that includes inflammation, tissue formation, and remodeling. In order to scientifically prove the claimed utilization of the plant, the effects of the extracts were investigated using burn wound model in mice including *in vivo* antioxidant and antimicrobial activity. Healing was assessed by the rate of wound contraction, period of epithelization and hydroxyproline content. The antimicrobial activity of extract was also studied against bacterial and fungal strain using agar dilution method. *In vivo* antioxidant activity was performed to understand the mechanism of wound healing potency. The result showed that *C. cajan* leaf extract has significant wound healing activity as evident from the rate of wound contraction and epithelization. Hydroxyproline content was correlative with the healing pattern observed. *C. cajan* leaf extract treatment promote up-regulation of pro-inflammatory cytokines TNF- α during early phase of wound healing, inhibit ROS accumulation and exhibit moderate antimicrobial activity. We propose induction of cytokine production as one of the mechanism for acceleration of wound healing by *C. cajan* leaf extract which may be due to flavonoids and stilbenes.

Biography

M N Motiwala has completed her Master in Pharmacy (Pharmacognosy & Phytochemistry) from R T M Nagpur University in 2009. She has additional qualification as Diploma in Clinical Pharmacy and Diploma in Industrial Relation and Personnel Management. Presently, she is working as Assistant Professor at Dadasaheb Balpande College of Pharmacy Besa, Nagpur, Maharashtra. She has published various articles in national and international journal. She has delivered oral presentation entitled "Effect of piperine on bioavailability of paclitaxel" at Current Drug Development International Conference, 2010, in Thailand.

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