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Screening of polyherbal plants for its anti-inflammatory activity and development of its topical dosage forms

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The present research has been undertaken with the aim to formulate and evaluate the herbal containing *Trigonella foenum-graecum* and *Allium sativum* extract. The phytochemical screening of fenugreek seed extract and garlic extract show important compound such as steroids, alkaloids, flavonoids, reducing sugars, carbohydrates, saponin, amino acids and terpenoids. The gel formulation was designed by using aqueous extracts of seed of fenugreek and cloves of garlic bulb in varied proportion of carbopol 934 with other ingredients. Herbal gel formulation were evaluated in vitro for its pH, appearance, spreadability, viscosity, rheology study, extrudability, stability and in vivo study skin irritation as well as anti-inflammatory activity had been performed. Anti-inflammatory activity was carried out using optimized formulations and result indicated that all three formulations (F3, G3 and FG3) showed significant results of anti-inflammatory activity. As previous report indicated, presence of steroids and flavonoids contributes crucially for anti-inflammatory activity. Hence, anti-inflammatory observed in all three formulations may be due to presence of diosgenin and flavonoids. The anti-inflammatory activity of FG3 gel was slightly higher than other two formulation gels, as it has both fenugreek and garlic, which may produce potentiating effect when given in combination. An in vitro antifungal activity was performed against fungal strain *Trichophyton mentagrophytes*. On determining MIC for all three formulations it was observed that zone of inhibition of G3 gel was more than F3 and FG3. As G3 gel was garlic extract gel and flavonoid content in garlic extract was found higher than fenugreek extract, which contributed significantly for antifungal activity. The result suggests that the topical formulations optimized from garlic, fenugreek and their combination may be effective for dermatophytosis and dermal injury.

Biography

Vinod Doharey has completed his MPharm from Sudhakar Rao Naik Institute of Pharmacy, Amaravati University, India. He is the Assistant Professor in University Institute of Pharmacy, CSJM University, Kanpur, India since 2008.

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