Comparative efficacy of two polyherbal creams with framycetin sulfate on diabetic wound model in rats.

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Abstract BACKGROUND: Diabetes mellitus is one of the metabolic disorders that impede normal steps of wound healing process. Worldwide, 15% of the 200 million diabetics suffer from diabetic wounds. Diabetic complications, such as foot ulcer, impose major public health burdens worldwide. OBJECTIVE: The present study was carried out to evaluate comparative efficacy of polyherbal creams with framycetin sulfate cream on diabetic rats using incision and excision wound models. MATERIALS AND METHODS: Alloxan (120 mg/kg, intraperitoneal) induced diabetic rat models (incision and excision models) were used to evaluate wound healing effect of cream A, B, and framycetin sulfate. Cream A and B were applied for a period of 10 and 20 days for incision and excision wound models, respectively. Incision wound model was used to assess the effect on breaking strength. Wound contraction and epithelialization period were measured using excision wound model. The data were analyzed by one-way ANOVA followed by Bonferroni post-test. RESULTS: Tensile strength of the animals treated with cream B (941.66 ± 15.36) was found to be significantly greater (P < 0.001) as compared to tensile strength of the animals treated with cream A (825 ± 22.36). Wound treated with cream B was found to heal significantly (P < 0.001) faster (day 17) as compared to wounds treated with framycetin sulfate (day 21). CONCLUSIONS: Cream B was found to be more effective wound healing agent than cream A and framycetin sulfate cream in treating diabetic wounds.

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