

Changes in the Body Weight and Wound Contraction Rate Following Treatment with Piper betel Extract in Diabetic Wounds

Authors : Nurul Z. Sani, Amalina N. Ghazali, Azree Elmy, Lee C. Yuen, Zar C. Thent

Abstract : Piper betel (P. betel) leaves is widely used in Asian countries for treating diabetes mellitus and its complication. In our previous study, we observed the positive effect of P.betel extract on diabetic wounds following 3 and 7 days of treatment. The aim of the present study was to determine the effect of P.betel leaves extract in the diabetic rats was observed in terms of body weight and wound contraction rates following 5 days of the treatment. Total 64 male Sprague-Dawley rats were used and the experimental rats received a single dose of 60mg/kg of Streptozotocin (STZ) injection, intraperitoneally. Four full thickness (6mm) cutaneous wounds were created on dorsum of each rat. The rats were divided into (n=8): Non-treated Control (NC), Non-treated Diabetic (ND), diabetic treated with commercial cream (SN) and diabetic treated with 50mg/kg of P.betel extract (PB). The rats were sacrificed on day 0 and 5 post wounding. Significant increased in wound closure rate, body weight was observed in PB group compared to ND. Histological deterioration was restored in the P. betel extract treated wounds. It is concluded that topical application with P.betel extract for 5 days of post wounding offers positive scientific value in diabetic rats.

Keywords : diabetes, piper betel, wound healing, body weight, morphology

Conference Title : ICMBE 2015 : International Conference on Medical and Biomedical Engineering

Conference Location : Paris, France

Conference Dates : April 27-28, 2015