

Abstract**Effect of Pomelo Fruit Peel Extract on Wound Healing in streptozotocin diabetic rats**

Delayed wound healing is a chronic complication in diabetic patients than in healthy individuals. Citrus is an important fruit with great health and economic benefits for humans in the world, Pomelo (*Citrus maxima and Citrus grandis*), also known as Chinese grapefruit. Pomelo belongs to the genus Citrus of the family Rutaceae. Previous studies showed that pomelo peels contain an abundant bioactive compound, which may promote wound healing in experimental animals. The aim of this study is to prepare optimized extraction of pomelo peels using different experimental conditions and investigate the possible healing effect of oral treatment with pomelo peel extract (PPE) on induced excision skin wound in diabetic rats. This study was done on rats divided into five groups each of 8 rats (three treatment groups given by oral gavage compared to two control groups). Diabetes was induced by intraperitoneal injection of a single dose of Streptozotocin (STZ) 65 mg/kg body weight. After diabetes induction, full thickness excision wound was made in rats, and the study continued for 3 weeks.

The results of this study showed significant reduction in blood glucose and both percentage & time to wound closure in the treated groups, also a significant increase in hydroxyproline and total protein content of the healed wound tissue in the treated groups compared with control groups and comparable to standard plant extract treated groups. This study experimental data proposed that oral administration of pomelo peel extract rich in vitamins and flavonoids has a good therapeutic potential in the treatment of complicated wounds in diabetes.