Abstrak

Effects of Topical Pomegranate Peel Extract on Healing of Split Thickness Wound in Rats

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Background : Split thickness skin grafting (STG) is a frequently used technique for covering soft tissue and skin defects. Donor sites created after harvesting a split-thickness skin graft present an additional wound to manage. The management of the donor site after removing the skin graft is an important patient comfort issue. A suitable wound dressing helps to achieve wound healing and to satisfy patients barring any complications, such as infection or pain. Although numerous dressings have been studied, there is not one perfect dressing for use on the donor site that is easy to use, provides patient comfort, prevents infection, is inexpensive, and promotes faster re-epithelization.

Objective : The aim of this study is to examine the effect of topical pomegranate peel extract application on split thickness wound healing.

Method : A prospective experimental study carried out on 14 male rats at about 3 months old. Two split thickness skin graft donor sites were made on the back in each animal, one control, and the other in which topical pomegranate peel extract was applied. Skin specimens were collected on the 3rd and 10th days from 7 different rats at each period. The sections were stained with hematoxyllin-eosin for examining the number of fibroblast and collagen thickness.

Results: Pomegranate peel extract increase the number of fibroblast and collagen thickness in inflammation phase but decrease the number of fibroblast and collagen thickness in proliferative phase meanwhile promotes rapid re-epithelization.

Keywords *: Pomegranate peel extract, skin graft, wound healing, fibroblast, collagen*