

A Study of Wound Healing by Two Methods: Vacuum-Assisted Closure and Conventional Dressing Closure

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Abstract

Background: Chronic wounds and diabetic wounds are often presented in the surgery unit. The main aim of treatment is to initiate wound healing as quickly as possible without complications. We in the current study tried to compare the healing by vacuum-assisted healing versus conventional dressing method. **Methods:** This cross-sectional study was done on n=50 cases admitted in the Department of General Surgery, Prathima Institute of Medical Sciences, Naganoor, Karimnagar. Patients underwent a detailed history and general physical examination followed by systemic examination and laboratory investigations including CBC, FBS, PPBS, HbA1c, RFT, BT, CT, HCV, and if required arterial doppler and radiological investigations. The cases were randomly allotted in two different groups of n=25 each. Group I (Vacuum-assisted closure) and Group II conventional dressing. **Results:** The mean percentage of granulation tissue formation in group I was 85.05% appeared on the 8th day of the dressings and in group II the mean granulation formation was 56.03% on the 8th day of the dressings. There was a statistically significant difference noted in the appearance of granulation tissue in both methods. Group I, showed significantly greater granulation tissue formation as compared to group II. The Wound Contracture of the wound for VAC dressings was 12.4% and 5.3% in conventional dressings in our study was statistically significant in Group I as compared to group II dressings. **Conclusion:** Within the limitations of the present study, it was found that overall duration of hospital stays, granulation tissue formation, and wound contracture were found to be better in vacuum-assisted closure as compared to the conventional closure method. The total number of debridement needed to do were less and the post-operative complications were also found to be less in vacuum-assisted closure, and it was also found to be economically better. Therefore, VAC must be applied infeasible cases for wound closures.