

Prospective, Randomized Study of the Effect of Pressure Garment Therapy on Pruritis and Pain in the Maturing Burn Wound

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Pressure garments are accepted as part of the rehabilitation of the burn patient. There is no prospective, randomized clinical studies demonstrating the affect of pressure garment therapy on the symptoms of pain and pruritus associated with the maturing burn wound. A randomized, prospective study was undertaken to determine the effect of pressure garment therapy (PGT) in reducing pain and pruritus during burn wound maturation in burn patients. Patients who required more than 14 days, or skin grafts, to achieve closure of burn wounds were included in this study. After giving informed consent they were randomly assigned to either receive PGT or no PGT (NPGT). All patients were followed using the Vancouver Scale to assess maturity and symptomatology of all involved areas. Wounds were considered mature when less than 10% of the entire wound exhibited either active scar hypertrophy or hyperemia. Pain and pruritus were measured using a visual analog scale at each follow up visit for the duration of the patients involvement in the study. Data were compared using the repeated measures analysis of variance with a $p \leq 0.05$ being regarded as significant. One hundred and thirty-five (135) consecutive patients were enrolled in the study; 71 were randomly assigned to PGT and 64 were assigned to NPGT. Twelve (12) patients refused to wear pressure garments in the PGT group, and six (6) patients were lost to follow-up in the NPGT group. One hundred and seventeen (117) patients data comprise this report. There were no significant differences between the two groups when the male/female ration, age, body surface area burn, or time to maturation were compared. The F-test from analysis of variance show that both the pruritus and the pain VAS measurements were parallel between the two groups over time. ($p = 0.59$ for pruritus and 0.78 for pain). No significant difference in mean pain scores was found between the PGT and NGPT ($p = 0.36$). These data suggest that PGT has no affect upon the subjective symptoms of pain and pruritus experienced by burn patients during rehabilitation and wound maturation.