



WOUND HEALING

A COMPARISON BETWEEN EARLY AND DELAYED WOUND DRESSING REMOVAL IN PUNCH BIOPSY WOUNDS: A PROSPECTIVE, RANDOMIZED CONTROLLED TRIAL

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Introduction: In clinical practice, the standard recommended time to keep surgical wounds dry and covered with dressing is 24-48 hours. Several studies compared time to removal of wound dressing and found no statistically significant difference in infection rates whether the dressing is removed before or after 48 hours. However, in Thailand, keeping wounds closed and dry until suture removal is a common recommendation.

Objectives: To compare infection rates, pruritus, patient's satisfaction, and cosmetic outcomes of the recommended wound dressing duration of 24 hours to Thailand's common practice where dressing is kept until the day of suture removal.

Materials and Methods: A randomized, evaluator-blinded, prospective, comparative study was conducted in 52 participants who underwent punch biopsy for diagnostic purposes. Each participant was randomly assigned to either remove dressing 24 hours after the procedure or on the day of suture removal. Interventions that may interfere with wound healing or infection rates, such as antibiotic application or ingestion, were prohibited. A blinded dermatologist assessed photographs of wounds taken on suture-removal day and one week after suture removal for signs of infection. Degrees of pruritus and satisfaction scores were obtained using visual analogue scale and quality of life was assessed by EQ-5D-5L and DLQI questionnaires.

Results: Out of all participants, 48 completed the study. Surgical site infection was found in 6 (25.0%) participants from the 24-hour wound closure group while no participants (0.0%) from routine closure group has surgical site infection ($p = 0.011$). There was no difference in participants' itch score, satisfaction score, or quality of life between the two groups.

Conclusion: Early wound dressing removal highly increases the risk of surgical site infection in Thailand. Delaying of dressing removal in punch biopsy wound is still recommended in countries with tropical climate, particularly hot weather and high humidity.

