



The use of a horizontal mattress suture and notches in 3% bismuth tribromophenate–impregnated petrolatum gauze tie-over bolster dressings to improve surgical outcomes after skin grafts

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SURGICAL CHALLENGE

The initial days after skin grafting are crucial to successful surgical outcomes. Revascularization begins within 48 to 72 hours, with full circulation restored in 4 to 7 days.¹ An ideal graft dressing should provide graft stability, prevent wound bed/graft separation, minimize graft base damage, and be efficient.

THE SOLUTION

We present a tie-over bolster technique used for full-thickness skin grafts. The graft/wound edges are approximated with absorbable suture. Our technique involves a tie-over bolster using a nonadherent dressing covered with 3% bismuth tribromophenate–impregnated petrolatum gauze, which is cut/folded to approximate graft shape. Before being sutured in place, 2 notches are cut on opposite sides of the nonadherent dressing and the 3% bismuth tribromophenate–impregnated petrolatum gauze. A horizontal mattress using nonabsorbable suture is placed within surrounding healthy tissue with the suture lying within these notches, which provides bolster stability (Fig 1). Routine dressings cover the bolster and are left in place for 1 week until follow-up.

This technique has the following advantages to traditional bolster techniques:

- Only damages graft base once with primary edge approximation and avoids further damage with basting sutures
- Avoids graft base damage because the horizontal mattress is placed through “non-graft base” perilesional skin
- Notches provide superb bolster/graft stability and pressure without suturing through the graft base
- Is quicker and simpler than traditional tie-over techniques
- Bolster stabilization only requires 1 suture

This technique may prove important in free-margin locations (ie, nasal ala, ear). Tie-over bolster dressings may also be useful in locations where underlying structures make the use of basting sutures difficult.²

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Fig 1. Notched 3% bismuth tribromophenate–impregnated petrolatum gauze tie-over bolster dressing technique with 2 notches at the superior and inferior aspects of the dressing. A horizontal mattress suture is placed within perilesional “healthy skin,” with the suture lying within the notches to provide stability and pressure to the bolster, graft, and wound base.

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