

'HOW I DO IT' GUIDE **MELANOMA AND SKIN CANCER**

How to inset a full-thickness skin graft: a continuous quilting technique

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Introduction

Full-thickness skin grafts (FTSGs) are usually secured with tie-over bolster dressings, quilting (or basting) sutures, or a combination of both. This guide describes a modified technique of securing FTSGs by way of a continuous quilting suture to increase surgical efficiency.

Stabilisation and prevention of haematoma are two important factors to allow a skin graft to take to its recipient site.^{1,2} This is most commonly provided by a tie-over dressing after suturing the graft in place.³ The technique of using quilting sutures placed in the graft as an alternative to bolster dressings has also been well documented.⁴ There has been no evidence to suggest a difference in rates of haematoma, seroma, neovascularisation and graft survival between these two techniques.³⁻⁵

Technique

The FTSG is trimmed and placed onto the recipient bed. The peripheral edges of the graft are secured with either interrupted or continuous absorbable sutures, such as VICRYL RAPIDE (Polyglactin 910; Ethicon Inc., North Ryde, NSW, 2113). Using the same absorbable suture that secured the periphery of the graft, a quilting suture is placed in the graft and recipient bed (**Figure 1**). A knot is tied, leaving a tail end of 1–2 cm.

Leaving both tail end and suture intact, a second quilting suture is placed in the graft (**Figure 2**). This process is repeated in a continuous manner until sufficient quilting sutures have been placed to hold the graft in contact with the recipient bed (**Figure 3**).

If suturing in a sequential pattern (circular or horizontal/vertical stripe pattern), the final quilting

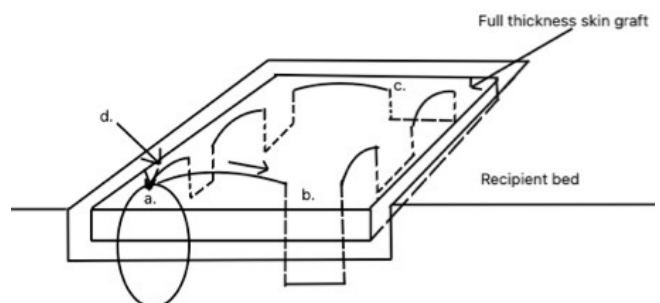


Fig 1. As outlined in the technique section, this diagram demonstrates the continuous suturing technique to secure a full-thickness skin graft

suture can be aligned with the starting point and tied onto the initial tag end. If not, the suture can be tied off onto itself (**Figure 4**).

This completes the graft inset process and it can now be dressed as per the surgeon's preference.

Discussion

Certain anatomical locations lend themselves to improved ease of performing a continuous quilting suture. These include areas with two external accessible surfaces, such as the external pinna, conchal bowl and the nasal alar.^{6,7} When suturing a two-surface area such as the helix, commence the quilting suture on the recipient surface (for example, postauricular) so the knot burden is placed on recipient skin and not on the graft.

With no difference in graft complications and success between quilting and tie-over dressings,³⁻⁵ when using the continuous quilting method, there is no need for a tie-over bolster dressing. This is another time-saving step intraoperatively, as a simple dressing or ointment can be applied to the graft. Additional benefits include simpler follow-up and review in dressing clinics as there are no sutures to remove, there is no damage to surrounding tissue from tie-over sutures, it is more efficient and economical for the surgeon, and it is more comfortable for the patient.²

Tension between the skin graft and recipient bed is offset in the continuous suture, promoting nutrition to graft bed and providing a consistent, non-constrictive vascular interface for neovascularisation into the graft.

With successful sequential suturing, only two knots are tied when quilting a graft, for the beginning and end. Fewer knots mean fewer tail ends being trimmed and suture material wasted, allowing for a far more economical use of a suture. The continuous quilting technique is also much quicker, as fewer knots are being tied and there is less changing of instruments and fewer delays awaiting an assistant (if available) to cut the suture.

Conclusion

The continuous quilting technique described provides a more efficient method for inset of FTSGs compared to interrupted quilting sutures and tie-over dressings, without compromise on graft success.

Patient consent

Patients/guardians have given informed consent to the publication of images and/or data.



Fig 2. The initial quilting suture with knot tied on recipient skin (postauricular) surface, leaving sufficient tail end. Neither are cut.



Fig 3. Continuous quilting sutures are placed sequentially around the surface of the full-thickness skin graft.



Fig 4. Quilting sutures are placed continuously until the full-thickness skin graft is secured, with all knots hidden on the postauricular surface.

Conflict of interest

The authors have no conflicts of interest to disclose.

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