The use of barbed suture devices has become more prominent in recent times, and this is reflected in the fact that most suture companies now have a barbed suture product in their armamentarium. Although barbed devices are mainly aimed at wound closures, their utility has been reported in body contouring surgery,1 flexor tendon repairs,2 and facial rejuvenation surgery.3

Tie-over dressings have long been described for skin grafts, and they can be laborious and challenging for the sole operator. The classic silk tie over is still practiced, but newer techniques using an absorbable running tie-over suture4 are becoming more popular. However, these running sutures require frequent tensioning to ensure adequate downward pressure is applied to the graft and this can be problematic.

We describe the novel application of a barbed suture as a tie-over dressing for skin grafts. We used a 3-0 polydioxanone Stratafix (Ethicon Inc., Somerville, NJ) suture for this purpose. The suture is a bidirectional device with 20 barbs per centimeter of suture material. The barbs are distributed circumferentially around the suture at 120 degree rotations, and each barb measures 0.38 mm in length. There is a needle at each end of the suture material. The barbs act as anchors in the skin, so constant tensioning of the suture is not required. The bidirectional nature of the suture prevents any slippage, and the barbs even act as a grip on the underlying wool dressing. Furthermore, the method described is both quick and simple to learn and would be useful for the sole operator. (Plast Reconstr Surg Glob Open 2014;2:e137; doi: 10.1097/GOX.0000000000000078; Published online 22 April 2014.)

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Summary: Barbed suture technology is becoming increasingly popular in plastic surgery and is now being used in body contouring surgery and facial rejuvenation. We describe the novel application of a barbed suture as a running tie-over dressing for skin grafts. The barbs act as anchors in the skin, so constant tensioning of the suture is not required. The bidirectional nature of the suture prevents any slippage, and the barbs even act as a grip on the underlying wool dressing. Furthermore, the method described is both quick and simple to learn and would be useful for the sole operator. (Plast Reconstr Surg Glob Open 2014;2:e137; doi: 10.1097/GOX.0000000000000078; Published online 22 April 2014.)

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Fig. 1. A squamous cell carcinoma on the vertex of the scalp.

Fig. 2. A small bite in the skin was made, and the barbed suture was pulled through until the midpoint was met. The midpoint heralds the change in direction of the barbs. It also acts as the primary anchor point.

Fig. 3. Each arm of the barbed device was passed from side to side over the underlying wool dressing. The barbs act as a grip on the wool dressing thereby preventing slippage.

Fig. 4. Once the suture material had run out, each needle was cut from the suture and the ends taped to the skin.
each point where they intersect with the skin, thereby removing the need to constantly apply tension on the suture. Furthermore, the barbs act as a grip on the underlying wool dressing thereby preventing slippage. Our technique is easily performed without the need for an assistant and may be beneficial to the sole operator. Suture removal is made easy by the absence of a knot and the ability to pull out in the direction of the barbs. The suture is cut at several places and pulled out in the direction of the barbs. The running tie over has been reported to be 8–10 times faster than a traditional tie over, and we feel that our technique is even better as no loss of tension is encountered during each passage.

Although barbed devices are more expensive than nonbarbed sutures, the ability to apply constant compression during graft application in a safe and efficient manner may be of benefit and of particular use for sole practitioners.

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